

MANUAL OF THE CIEMAT MEDICAL SERVICE

Translation from SPANISH into ENGLISH of "Manual del Servicio Medico del CIEMAT", Revision 1, November, 1991, pp. 1-205.

Translated for

U.S. Department of Energy  
Washington, D.C.

Translated by

SCITRAN COMPANY  
1482 East Valley Road  
Santa Barbara, California 93108  
(805)969-2413  
FAX (805)969-3439

CIEMAT/SM/01/91

MANUAL OF THE CIEMAT MEDICAL SERVICE

Revision 1, November, 1991

CIEMAT

ENERGY, ENVIRONMENTAL, AND TECHNOLOGICAL  
RESEARCH CENTER

GENERAL TECHNICAL SECRETARIAT  
SAFETY OFFICE  
HEALTH SAFETY UNIT

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SECTIONS IN BUILDING NO. 7 OF CIEMAT

## 1 THE GOAL OF THE MEDICAL SERVICE

The basic aim of the Medical Service is monitoring, protecting and furthering the health of the CIEMAT work force, basically through preventive measures and orientated to: promote and maintain the highest level of physical, mental and social well being of the work force; to prevent any damage to health that might come from working conditions; to protect them against occupational hazards; to provide the best possible psychological and physical working environment; and, in a word, to fit the work to the man, and the man to the work.

To fulfill this goal, it has been necessary to act on two levels:

### 1) PREVENTIVE LEVEL

Making use of systematic study of the hygiene and cleanliness of the work place and of preventive medical examinations of the workers which are directed towards the specific hazards of the site.

### 2) LEVEL OF INTERVENTION

This includes help, diagnosis and treatment of industrial accidents and occupational illnesses, as well as rehabilitation afterwards, always taking care to provide for the recovery of the whole person and their complete social and occupational reintegration.

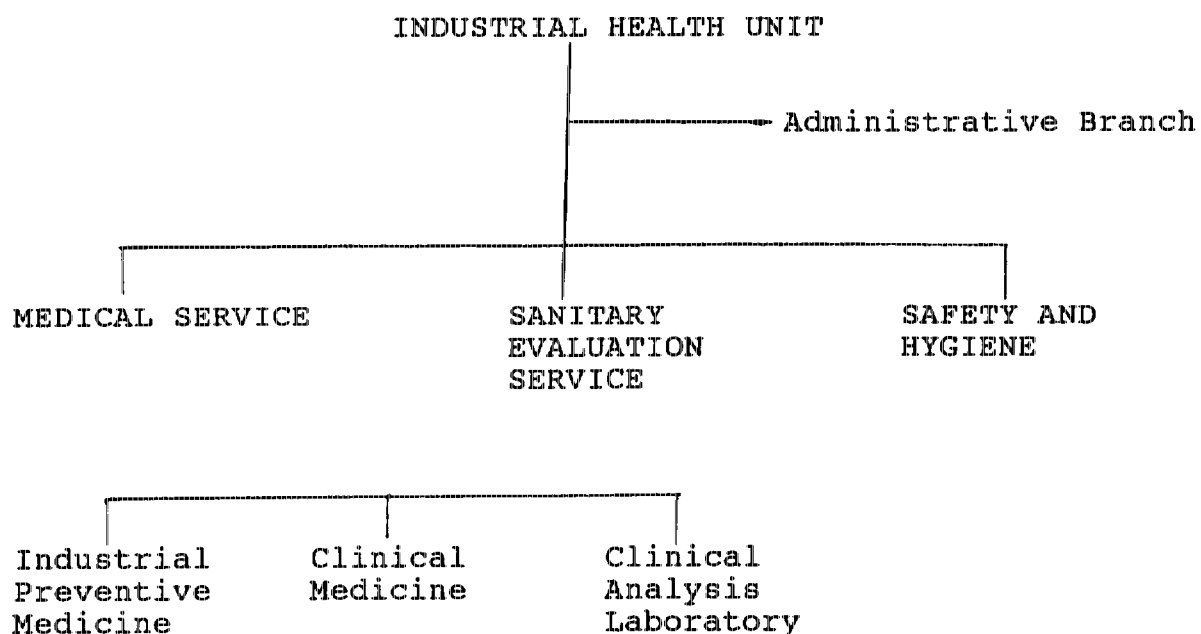
Work on this level includes attention, diagnosis and treatment of any common medical condition which might appear during the working day. It also provides systematic monitoring of chronic illnesses which a worker might carry, health evaluations, and for whatever other eventuality the Service can rely on a qualified doctor to handle.

## 2. ORGANIZATION OF THE SERVICE

The CIEMAT Medical Service was created in 1949. It is an Industrial Medical Service, which satisfies the requirements established in Decree 1036/1959 which reorganized the Industrial Health Services, and of the Order dated 21 Nov. 1959 which approved the Industrial Medical Services Regulations. It is authorized as a Specialized Medical Monitoring Service for Persons Occupationally Exposed to Ionizing Radiation by the Minister of Hygiene and Consumer Affairs (Ministerio de Sanidad y Consumo) effective 10 Feb. 1988.

### 2.1 OPERATIONAL HIERARCHY

The Service operates within the framework of the Industrial Health Unit of the General Technical Secretariat, and is organized as shown below:



Its activities can be grouped in three quite distinct areas: preventive industrial medicine, clinical medicine, and clinical laboratory analyses, which have the following functions:

#### PREVENTIVE INDUSTRIAL MEDICINE

performs industrial health examinations  
performs industrial hazard monitoring programs  
carries out preventive medicine campaigns  
carries out immunization programs  
presents programs of hygiene education  
evaluates the workers and provides guidance in matters of:  
    health problems and adaptation to the workplace  
    the effects on health of the introduction of new  
    technology and work practices  
participates in the Committee for Industrial Safety and Hygiene  
participates in research and development projects  
participates as a docent in training programs  
participates in congresses, seminars, information days, etc,  
    dealing with themes related to Industrial Medicine  
participates in continuing medical training courses

#### CLINICAL MEDICINE

medical assistance in industrial accidents and occupational illnesses  
medical assistance for extra-industrial diseases  
functional rehabilitation and readaptation of handicapped workers  
psychological and social assistance to prevent possible after effects of industrial and non-industrial disease  
carries out work for public or private Health Facilities  
assessment of workers and management in matters of using health resources  
participates in research and development projects  
participates in congresses, seminars, information days, etc,  
    on themes related to Industrial Medicine  
participates in continuing medical training courses

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#### LABORATORY OF CLINICAL ANALYSES

carries out hematological, biochemical, immunological, and serological tests, and urinalysis and fecal analysis  
performs chromosome testing for biological dosimetry  
participates in research and development projects  
participates as a docent in training programs  
participates in programs of analytic quality control  
participates in continuing training programs

The three areas of activity described are closely related one to the other, in order to give the Service the maximum efficiency and coordination. The Medical Service itself is also closely connected to the other two Services of the Unit: the Health Evaluation Service and the Service of Industrial Hygiene and Safety.

## 2.2 HUMAN RESOURCES

Presently, the Medical Service includes the following work force:

- 1 Medical Unit Head
- 1 Pharmacist, Head of Laboratory
- 1 Doctor Specializing in Industrial Medicine - a specific contract
- 1 Medical analyst - a specific contract
- 5 Technical Health Assistants
- 1 Officer, rank 2 (Medical Archives)
- 1 Officer rank 3 (Laboratory Assistant)
- 1 Officer, rank 3, practical, Laboratory Helper (C.A.M. contract)
- 1 Equipment operator. Specific contract.

## 2.3 TECHNICAL RESOURCES

### 2.3.1. Facilities

The Medical Service utilizes several buildings with an area of approximately 600 s. m. located in plant 1 of building number 7 (Plan 1 of the Supplement to the Appendix to this manual).

Area for Medical Examinations - includes the following rooms:

reception (1)

waiting rooms (2)

audiometry and vision testing (3)

extraction (4)

radiology : grade 3 x-ray apparatus - IR-23 (Plan 2 of the Supplement to the Appendix)

ECG (6)

respirometry (7)

examination room (8)

ultrasound (9)

Laboratory areas

clinical analysis lab (10)

biological dosimetry lab (11)

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Area for clinical medicine:  
rehabilitation and electrotherapy (12)  
consulting nurse (13)  
emergency room (14)  
recovery room (15)  
treatment facility for irradiated or contaminated  
persons (16)  
medical consultation room (17)

Administrative area:  
secretarial office (18)  
medical storeroom (19)  
archive (20)

### 2.3.2. TECHNICAL EQUIPMENT

#### DIAGNOSTIC EQUIPMENT

-SIEMENS RADIOLOGICAL EQUIPMENT, consisting of:  
Polymat 100 multipulse x-ray generator. microprocessor  
controlled, and equipped with an Iontomat M automatic  
exposure meter for the 3-field x-ray camera system

Optilux 150/40/73C-100L emission tube with a moving CALOREX  
anode of rhenium-graphite alloy

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Multix CP table with catapult anti-diffusion and a lead  
12/40 [12:40 ?]grating.

Bucky "ES" wide-view equipment. Spiral, equipped with an  
anti-diffusor and a 12:1 lead grating.

- PHILIPS ORION ULTRASOUND. Real time, linear and sectorial  
views with high resolution. Equipped with sectoral and  
trapezoidal transducers with variable focus and a high  
resolution graphic screen.

-SIEMENS SICARD P ELECTROCARDIOGRAM - Portable, multi  
channel, battery power supply, with simultaneous capability  
for 12 readings and the continuous study of heart rhythm via  
a selected channel. Traces produced in real time, on a  
liquid crystal screen, and in deferred time on paper, using  
a SICARD D printer. Memory to store 20 recordings and  
output connector for computer link.

- KELLIGE MULTISCRIPTOR EK26 ELECTROCARDIOGRAM. Three  
channel, with modules phono- and mechano-cardiograms.

-MICRO S2 RESPIROMETER Computerized in an open system, for  
the analysis of volumes, capacities and for drawing fluid  
volume curves

- HORTMANN DA323 AUDIOMETER With two channels, for sound transmitted by air and by bone, with extensive sound insulation, sinusoidal testing signal, with the ability to test frequencies of 0.25, 0.5, 1, 2, 3, 4, 6, and 8 kHz and a minimum volume of 10 dB, with variations in steps of 5 dB.
- ESSILOR VISIOTEST VISUAL FUNCTION ANALYZER For the analysis of ametropy, stereoscopic vision, muscular balance and chromatic vision. Equipped with CAMPITEST, a perimetric device for the measurement of the horizontal field of view, and of a DE WECKER OPTOTYPE for adults.
- SECA 708 DIGITRONIC CLINICAL SCALES Microprocessor controlled, with a range of measurement from 100g to 200 kg. Equipped with a manual height and girth measurer.
- REISTER DE BAYONETA OTOSCOPIC AND OPHTHALMOSCOPIC EQUIPMENT Equipped with a varifocal ophthalmoscope with continuous focus, for varying lighting intensities at distances anywhere between zero and infinity.

#### THERAPEUTIC EQUIPMENT

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SANRO 3007 DOUBLE EMISSION LASER GUN equipped with an He-Ne plasma tube (632 nm) with 7 mW power and 5 infrared diodes (904nm) with 27 W peak power.

BOSCH ELEKTRONIK RADARMED MICROWAVE GENERATOR 2450 MHz and 200 W power.

ERBE 2000 PULSED SHORT WAVE GENERATOR with maximum emission power of 450 W, continuous or pulsed

ERGONOMIC BICYCLE with electronic indicator, pulse meter, calorie counter, odometer and monitoring timer

EXERCISE MACHINE for shoulder articulation, adjustable in height and resistance

WEIGHT MACHINE basic, with weights

ERBE ERBOTOM T71 electric scalpel, monopolar and bipolar, maximum power 50 W

#### DR-GER OXYGENOTHERAPY EQUIPMENT

ASPIRET CA-MI ASPIRATOR

## LABORATORY EQUIPMENT

-COULTER COUNTER S-PLUS JR. DIFFERENTIAL BLOOD ANALYZER  
Consisting of four elements: compressor, diluter, analyzer and data terminal and printer. Storage for results from a minimum of 37 samples (including histograms), or a maximum of 307 samples (without histograms). Measurements made on the principle of cell counts based on detection and measurement of variations in the electrical resistance induced by the passage of particles suspended in a conducting solution, flowing through a small aperture at a constant potential difference. These changes in resistance are proportional to the volume of the particles (principle of electric impedance). The method of hemoglobincianure is used to determine the concentration of hemoglobin, measuring the spectrographic absorption at 500 nm.

The parameters relevant to a total citrated blood sample [no quantity given] are given in Table 1.

TABLE 1.

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<u>MEASUREMENT</u>	<u>UNIT</u>	<u>RANGE</u>
Hemate	millions/ $\mu$ l	0-7
Hemoglobin	g/dl	0-25
Hemotocrit	%	-
VCM	fl	50-200
HCM	pg	-
CHCM	g/dl	-
Leucocytes	thousands/ $\mu$ l	0-99.9
Platelets	thousands/ $\mu$ l	0-999
VPM	-	5-20

Amplitude of hemate distribution  
Histogram of red cell distribution  
Histogram of white cell distribution  
Histogram of platelet distribution

- GENESIS 21 AUTOMATIC BIOCHEMISTRY ANALYZER - Multichannel, selective, equipped with 18 spectrographic channels and 3 additional channels for selected ion measuring electrodes. Simultaneous measurement of up to 21 biochemical parameters.

The analytic techniques which are employed are detailed in Table 2.



TABLE 2. BIOCHEMICAL MEASUREMENTS

MEASUREMENT	REACTION	SAMPLE	ABSORPTION (mm)	UNITS	RANGE
GLUCOSE	enzymatic- colorimetric	serum plasma	492-550	mg/dl	10-560
UREA	enzymatic	serum plasma	340	mg/dl	0-300
CREATININE	kinetic- colorimetric	serum	404	mg/dl	0-6
TOTAL CHOLESTEROL	terminal point	serum	500	mg/dl	0-500
HDL-CHLLESTEROL	centrifuge- precipitation- terminal	serum	500	mg/dl	-
TRIGLYCERIDES	enzymatic- colorimetric	serum	458	mg/dl	0-1000
URIC ACID	terminal colorimetric	serum	520	mg/dl	0-18
GOT	UV kinetic	serum	340	U1/l	0-442
GPT	UV kinetic	serum	340	U1/l	0-442
GGT	kinetic- colorimetric	serum	405	U1/l	0-400
TOTAL BILURUBIN	terminal colorimetric	serum	548	mg/dl	0-15
DIRECT BILURIBIN	colorimetric	serum	548	mg/dl	0-15
LDH	UV kinetic	serum	340	U1/l	0-1000
ALKALINE PHOSPHATASE	kinetic- colorimetric	serum	404	U1/l	0-800
TOTAL ACID PHOSPHATASE	kinetic- colorimetric	serum	404	U1/l	0-35
PROSTATIC ACID PHOSPHATASE	kinetic- colorimetric	serum	404	U1/l	0-35
AMYLASE	terminal point	serum plasma	450	U1/l	-
TOTAL PROTEINS	colorimetric	serum	550	g/dl	0-15
SERUM CALCIUM	terminal colorimetric	serum	550	mg/dl	0-16
IRON	colorimetric	serum	628	μg/dl	0-1000

- UROTRON RL9 AUTOMATIC REACTIVE STRIP URINE ANALYZER. /10  
Determination of the values of 9 parameters in urine samples using 11 channel reflective photometry.

The analytic techniques which are used are detailed in table 3.

TABLE 3. URINE MEASUREMENTS

MEASUREMENT	METHOD	ABSORBENCY	UNITS	RANGE
pH	methyl red blue bromothymol	634	-	5-9
GLUCOSE	glucose peroxidase	608	mg/dl	0-300
PROTEINS	protein error in pH	557	mg/dl	0-500
CETONIC BODIES	Legal's test	608	mg/dl	0-150
BILIRUBIN	diazonio- bilirubinic salt	557	mg/dl	0-12.0
UROBILIONOGENE	diazonio-urobil- inogenic salt	557	mg/dl	0-12.0
NITRATES	Griess test	557	+/-	-
LEUCOCYTES	esterase activity	557	/μl	0-500
ERYTHROCYTES	hemoglobin oxidation	665	/μl	0-250

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- BOEHRINGER COATRON JUNIOR COAGULOMETER - Twin channel with infrared turbidometric reading. It measures the following:  
Prothrombin time: Calcium-thromboplastin method, 37° C  
Thromboplastin partial time : Cephalin-kaolin method at 37° C  
Fibrinogen: Clauss quantitative method at 37° C

ZEISS III BINOCULAR PHOTOMICROSCOPE - Integral 35 mm photographic camera, completely automatic and equipped with flat field lenses of 16/0.35, 40/0.65, 100/1.25 and a NEOFLUAR 63/1.25 fluorescent lens.

NIKON LABOPHOT BINOCULAR MICROSCOPE Equipped with flat field color corrected lenses of 40/0.1, 10/0.25, 20/0.4, 40/0.65, 100/1.25.

- AIRFLUX H-200 TABLETOP LAMINAR FLOW CLEAN BOX Class 100 sterile work area (US federal standard 209a), sterile air exchange at rate of 1550 m<sup>3</sup>/hr.

- BOEHRINGER REFLOTRON REACTIVE EXCHANGE PHOTOMETER  
Quantitative measurement using the technique of reflective photometry for biochemical analysis.

- LKB 2103 ELECTROPHORESIS POWER SUPPLY With continuous automatic control, from 10 to 2000 volts, with a stability of  $\pm 2$  V from 0 to 200 V and  $\pm 1$  V from 200 to 2000 V; current of 2 to 200 mA; power from 1 to 100 W, with a stability of  $\pm 2\%$  throughout the range.

- DIGISCAN ATOM 434 PHOTODENSITOMETER - Built in microprocessor for automatic calculation and printing on thermosensitive paper. Quantitative analysis of electrophoretic proteinograms and lipidograms on cellulose acetate supports.

- KONE MICROLYTE ION MODULE For the analysis using selected electrodes of Na, K and Ca in blood or serum and Na and K in urine. Capacity of 60 samples / hr.

- FISONS FI-STREEM FSL/4BD/C COUPLE DISTILLER Automatic production of 4 l / hr of double distilled water, free of pyrogens at a pH of 5.6 - 6.2.

- AUTESTER-DRY S-437-P AUTOCLAVE With a capacity of 28 l., maximum pressure 2 kg/cm<sup>2</sup> equivalent at 134° C.

- AREVALO AF-1000 STATIC ARMATURE REFRIGERATOR AND FREEZER Refrigeration between +5 and -2° C with a capacity of 750 l. Freezing at - 18° C with 250 l capacity.

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- SELECTA-206 CULTURE INCUBATOR - Capacity of 36 l and stability at 37° C for 90 min.

- SELECTA SERIES H STOVE - For desiccation and sterilization, with 80 l capacity

- ORTHO DIGICEN CENTRIFUGE. With a speed selector, digital tachymeter, electric brake, capacity for 16 15 ml. tubes.

- ORTHO CLINO CENTRIFUGE - With a speed selector, digital tachymeter electric brake and capacity for 16 15 ml tubes.

- SARTORIUS 2474 PRECISION BALANCE With mechanical weight changer; 160 gm weight increments; 0.1 g visual increments; 100 mg scale markings; projection scale steps of 1 mg and, for the micrometer, 0.01 mg, and accuracy of 0.01 mg.

- GIMA GIMETTE 3 DRY HEAT STERILIZER With thermostat, temperatures selectable up to 200 ° C and thermometer.

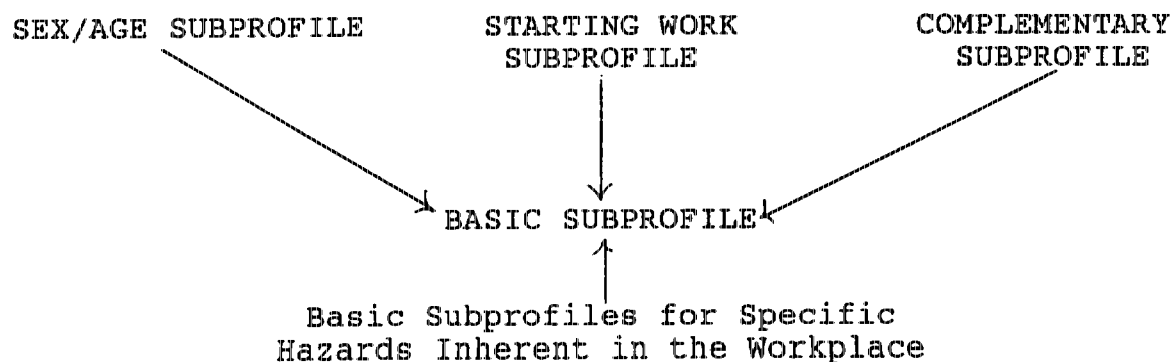
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### 3. PREVENTIVE MEDICINE. EXAMINATIONS IN INDUSTRIAL MEDICINE

In order to effectively monitor worker health an appropriate operational methodology was developed which permits study, analysis and control of the effects of the generic and specific hazards of the work environment. This method is based on carrying out industrial medicine medical examinations.

The great diversity in the hazards present in work places demands that preventive medical examinations should be designed with consideration given to their application, as much to enable the worker to adapt to the work place as to enable ongoing monitoring of workers' health. This means that there are numerous variables to be considered and a number of medical parameters to be monitored, since it is the number of hazards which has required the diversification of medical examinations, finally resulting in the concept of "medical examinations oriented towards specific hazards". Because of this, the medical examination protocol is designed starting from a basic open profile, complemented by a series of concurrent subprofiles defined by the addition of the following factors: personal characteristics, place of work, and possible diseases.

This relationship is shown in the following drawing:



### 3.1. DESCRIPTION OF PROFILES AND SUBPROFILES

#### 3.1.1. Basic Profile. Worker Clinical History

This constitutes the central nucleus [sic] of any medical examination, which has as its goal ascertaining the general health of the worker and his suitability for work.

It is designed starting from the WORKER CLINICAL HISTORY, the basis of the medical examination, to which are added a series of COMPLEMENTARY EXAMINATIONS which together supply the information needed to achieve the desired ends.

#### WORKER CLINICAL HISTORY

##### 1. Biographical data

- Address and phone number
- Married or single
- Number of children
- Reason for exemption from military service
- Family doctor
- Health center used
- Hospital file
- Level of training

##### 2. Employment history

- Work history (jobs, time worked and risks present; include periods of unemployment.)
- Place of work:
  - Profession and level
  - Employer - address and telephone number
  - Department and section employed in
  - Description and areas
  - Identified risks (as posing risks of occupational illnesses)
- Other concurrent jobs (hours and risks)

##### 3. FAMILY HISTORY

- Forebears
- Descendants

##### 4. PERSONAL HISTORY

- Living Habits
  - Tobacco
  - Alcohol

Coffee  
Other  
Medicines  
Special diet  
Physical exercise  
Hours of sleep  
Blood donations (dates)

- Allergies
  - Work related
  - Outside of work
  - To medicine
- Immunizations
  - Vaccinations, with dates

5. SELF-HISTORY

6. PHYSICAL EXAMINATION

- Measurements
  - Size
  - Weight (actual and "ideal")
  - Body type
  - Strength of grip
- Examination by organs and systems
- Skin, markings, and adenopathies
  - inspection and palpation
- Cardiocirculatory system
  - inspection and palpation
  - auscultation
  - blood pressure
- Respiratory system
  - inspection and palpation
  - auscultation

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- Digestive system
  - inspection and palpation
- Genitourinary system
  - inspection and palpation
- Musculoskeletal system
  - inspection, palpation
  - mobility

- Nervous system
  - inspection
  - balance
  - skin sensitivity
  - reflexes
  - walking/coordination
  - irregularity in sleeping/waking rhythm
- Endocrine-metabolic systems
  - inspection and palpation
- Ophthalmology
  - ametropia
  - ocular mobility
  - visual acuity
  - color vision
- E.N.T.
  - inspection, otoscopy
  - auditory acuity
  - clearness of nasal passages
- General impression
  - oral expressivity
  - mental agility
  - cooperativeness

## 7. COMPLEMENTARY TESTING

- Rest E.C.G.
  - 12 tests
  - record heart rhythm for 90 seconds
- Lung volume, forced exhalation
- Screening test for visual function

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- Audiometry
  - airborne sound
  - boneborne sound
- Analytic tests
  - Hematology
    - hemate
    - hemoglobin
    - hematocrit
    - VCM
    - HCM
    - CHCM
    - RDW

- leucocytes
- leucocyte mix
- platelets
- VPM
- VSG
- Biochemistry
  - glucose
  - urea
  - creatinine
  - uric acid
  - total cholesterol
  - HDL cholesterol
  - LDL cholesterol
  - triglycerides
  - GOT
  - GPT
  - gamma GT
  - total bilirubin
  - direct bilirubin
  - indirect bilirubin
  - alkaline phosphatase
  - total acid phosphatase
  - prostatic acid phosphatase
  - LDH-P
  - total protein
  - sodium
  - potassium
  - chlorine

- Urine
  - physico-chemical analysis
  - sedimentation

To this basic profile are added, in any given case, the data and examinations described in the following subprofiles, which can be concurrent. In this fashion, the final result of each examination protocol will reflect all the specific factors which may influence a given case.

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### 3.1.2. SUBPROFILE OF BEGINNING WORKERS

Starting from the basic profile, this gathers all information having to do with personal identification, work history and most particularly the characteristics of the intended place of work, on the basis of which all subsequent examinations are directed to determine the general fitness for the work, and more particularly, the suitability of the



psychophysical condition of the applicant to fulfill the tasks assigned.

#### CLINICAL WORK HISTORY

##### 1. Identification Data

surname and forenames  
identification number  
employee number  
S.S. number  
sex  
birthplace and date of birth  
entry date  
date of departure and reason  
date of dismissal and reason

##### 2. Work history

professional history  
    previous jobs, time and hazards (including unemployment)

##### 3. Personal History

diseases (dates)  
surgery (dates)  
previous habits (type and time)

#### COMPLEMENTARY EXAMINATIONS

record EKG for 90 second period  
audiometry, air and bone borne sound  
specialized ophthalmologic exam  
    retina  
    microscopic exam of anterior eye  
    tonometry

psychotechnical exam

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Analytic tests

##### Hematology

Blood group and Rh  
Reticulocytes  
morphology of the three cell types

##### Biochemistry

alkaline phosphatase  
total acid phosphatase  
LDH  
amylase  
CPK

serum calcium  
serum iron  
proteinogramm  
IGG  
IGM  
IGA

Coagulation

prothrombin time  
partial thromboplastin time  
fibrinogen

Immunology

HBs AG  
Anti Hbs Ag  
Anti Hbc Ag

Serology

VDRL

Faecal analysis

occult faecal blood

The Clinical Work History of this profile of workers starting on the job will be complemented in each of its parts by the examinations described in the subprofiles of specific hazards, with the aim of clearly identifying the existence of limits to the fulfillment of specific concrete tasks

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3.1.3. SEX AND AGE SUBPROFILE

Departing from the basic profile, this reflects the information referring to the organic differences between the sexes and to the complementary examinations and test used to detect possible risk factors and diseases which are age-related.

Man older than 45 years

Clinical Work History

1. Clinical Examination

cardiovascular system  
tests under stress

Complementary Examinations

record EKG for 90 seconds

audiometry, air and bone borne sound

specialized ophthalmologic exam

retina

microscopic exam of anterior eye

tonometry

ultrasound prostate exam

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Analytic tests

Biochemistry

alkaline phosphatase

total acid phosphatase

amylase

CPK

serum iron

proteinogram

apolipoprotein A-1

apolipoprotein B

Faecal analysis

occult faecal blood

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Woman younger than 45 years

Clinical Work History

1. Personal History

menarche

climacteric

pregnancies

pregnancies not carried to term

live births

2. Clinical Examination

Genitourinary system

breasts

menstrual type

contraceptive methods

current pregnancy (date of last menses)

Complementary Examinations

Specialized gynecological examination

laparoscopy

pap smear

Analytic tests

biochemical: serum iron

serological: rubeola antibody

Woman older than 45 years

Clinical Work History

Gynecological history

menarche  
climacteric

pregnancies  
pregnancies not carried to term  
live births

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2. Clinical Examination

cardiovascular system  
tests under stress

genitourinary system  
breasts  
menstrual type  
contraceptive methods  
current pregnancy (date of last menses)

90 second recording of ECG

Specialized ophthalmologic test  
retina  
microscopic examination of anterior eye  
tonometry

audiometry  
air and bone borne sound

ultrasound gynecological exam (at doctor's discretion)

Biochemistry

alkaline phosphatase  
acid phosphatase  
amylase  
CPK  
serum iron  
serum calcium  
proteinogram  
apolipoprotein A-1  
apolipoprotein B

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Serology Rubeola antibody (if fertile)

Faecal analysis  
occult faecal blood

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#### 3.1.4. SUBPROFILES FOR SPECIFIC RISKS INHERENT IN THE WORKPLACE

Departing from the basic profile, these provide all the information needed for a continuing evaluation of the worker's adaptation to their place of work, as well as the possible health effects of hazards present in the worker's particular job or in their working environment.

##### Ionizing radiation

##### Clinical Work History

##### 1. Work History

radiological data

professional data

other occupational exposure

medical exposure (diagnostic or therapeutic purposes)

dosimetric history

##### 2 Personal History

Special attention to nervous system ailments and afflictions of the sensory organs, as well as to possible toxic habits (use of psychotropic medications, alcohol or drugs).

##### 3. Clinical Examination

- Skin, markings and adenopathies: special attention is given to breaks or changes in the skin which would increase the risk of internal contamination, or which contraindicate the use of established procedures for external decontamination, or the use of equipment and clothing for personal protection.

- Cardiovascular system: intervention in cases of cardiac or vascular changes which might result in added risk of heart attack or loss of consciousness.

- Respiratory system: special attention given to the parameters of respiratory function whose degradation could support an increased risk of absorption of radioactive substances or which would contraindicate the use of respiratory protective equipment.

- Digestive system: special attention given to the existence of breaks in the epithelial-mucous membrane barrier which could promote an incorporation of radio-active substances, as well as to changes in function which could obstruct the natural mechanisms of internal cleansing.
- Genito-urinary system: special attention to the morphologic or functional changes which could interfere with excretion of contaminants.
- Musculo-skeletal system: Special attention to the cranial configuration which results in correct fitting of personal protective equipment, as well as to irregularities in gait which could increase the difficulty of evacuation in case of emergency.
- Nervous system: intervention in nervous system illnesses, whether of the central or peripheral system, which could change the state of consciousness, ability to feel and motor coordination.
- Endocrine-metabolic system: special attention to the morphologic and functional changes which could affect the metabolism of ingested substances.
- Ophthalmology: special attention to the adequacy of chromatic and stereoscopic vision and appearance of non-stochastic hazards.
- E.N.T. special attention to changes in morphology or function which could result in decrease in olfactory function, the ability to speak clearly or the use of decontamination procedures.

#### Complementary Examinations

record ECG for 90 second period

audiometry

air and bone borne sound

specialized ophthalmological test

retina

microscopic examination of anterior eye

tonometry

## Analytic Tests

hematology:     reticulocytes  
                  morphology of three cell types

coagulation:    prothrombin time  
                  partial thromboplastin time  
                  fibrinogen

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## Biochemistry

alkaline phosphatase  
acid phosphatase  
CPK  
serum iron  
proteinogram  
IGG  
IGM  
IGA

- Chromosome analysis for Biological Dosimetry (when considered necessary in doctor's judgment)
- Psychotechnical exam (during the initial examination on starting work, and at any other time it is considered useful)

## Noise

### Clinical Work History

#### 1 WORK HISTORY

list of noise hazards  
data of work place  
professional data  
other professional exposure  
evaluation of noise level

#### 2. FAMILY HISTORY

special attention to forbears of those with impaired hearing

#### 3. PERSONAL HISTORY

Special attention to ear ailments (chronic otitis, Menier's vertigo, otosclerosis, etc) craneoencephalic trauma, ototoxic drugs, etc.

Habits: special emphasis given to those with additional risk of noise exposure (hunters, discotheques, Walkman, etc.)

#### 4. CLINICAL EXAMINATION

Special attention given to conventional otoscopy, full-range acuity tests (Webber and Rinne) and anatomic conformation of the cranium, external ear and auditory canal which could affect the use of personal protective equipment.

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#### COMPLEMENTARY EXAMINATIONS

Audiometry - pure tones transmitted in air and in bone; tests six frequencies between 0.5 and 0.8 kHz, covering intensities between 0 and 70 dB.

Specialized ENT examination: whenever any problem with the ear or impaired hearing from whatever cause has been clinically ascertained.

#### Physical Loads

##### - CLINICAL WORK HISTORY

##### 1. Personal History

Special attention to congenital deformities, musculo-skeletal illnesses, accidents involving trauma, industrial or not, which have left lasting effects.

##### 2. Personal Interview

Special attention to musculo-skeletal indications.

##### 3. Clinical Exam

Special attention to the presence of scars, obvious deformities, mutilation, inflammatory lumps and swellings. Relief of osteoarthritic pain by mechanical vibration, of bursitis by pressure, of tendinitis and peripheral neuropathies by local pressure.

#### Visual Strength

##### - Clinical Work History

Special attention to the ergonomic conditions of the work place.

##### 1 Personal History

Special attention to previous ophthalmologic and musculo-skeletal problems.



## 2 Personal Interview

Special attention to ophthalmologic and musculo-skeletal indications.

## 3 Clinical Exam

Special attention to examination of the visual system. Attention is also given to the musculo-skeletal system, intended to detect signs of concurrent rickets, postural problems or neuromuscular fatigue.

### - Complementary Examinations

Specialized ophthalmic exam  
retina  
microscopic exam of anterior eye  
tonometry

## DRIVERS

### Clinical Work History

#### 1. Personal History

Special attention to nervous system illnesses and to sensory organs, as well as to possible dangerous habits (use of psychotropic medicines, alcohol or drugs).

#### 2. Personal Interview

Special attention to the indications of the central and peripheral nervous systems, the musculo-skeletal and cardiovascular systems, as well as to ophthalmology and ENT. and to the presence of psychological abnormalities.

#### 3. Medical Exam

Special attention to the examination of the nervous, cardiovascular, musculo-skeletal systems, and to the sensory organs.

### - Complementary Examinations

- 90-second recording of ECG
- audiometry - air and bone borne sound
- specialized eye examination  
retina

microscopic examination of anterior eye  
tonometry

#### HANDLERS OF BIOLOGICAL MATERIALS

- Clinical Work History

1. Identification of Work Place

Detailed description of the materials used, the working methods and conditions of temperature and humidity.

2. Work History

Special attention to those former places of work which may have involved exposure to biological materials.

3. Personal History

Special attention to viral hepatitis, allergies, dermatitis and immunizations. Identification of possible illnesses which might decrease the natural resistance required for work with infectious agents or which might contraindicate the necessary immunizations.

4. Clinical Exam

Special attention to the presence of breaks in the cutaneo-mucous barrier, dermatitis and any illness which could contraindicate the use of equipment and measures for personal protection, or the application of the necessary health measures.

- Complementary Examinations

- Analytic

immunology

HBs AG

Anti HBs Ag

Anti HBc Ag

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#### FOOD PRODUCT HANDLERS

- Clinical Work History

1. Personal History

Special attention to infectious illnesses of the digestive tract, respiratory or ENT systems.

2. Personal Interview

Special attention to indications of the digestive, respiratory and ENT systems, intended to identify chronic disease carriers.

### 3. Clinical Exam

Special attention to the presence of breaks in the continuity of the cutaneo-mucous barrier, to dermatitis and specially to infection lesions on the hands.

#### - Complementary Examinations

##### Analytic

##### immunology

HBs Ag

Anti HBs Ag

Anti HBc Ag

##### serology

Mantoux reaction

Salmonella typhi

S. paratyphi A and B

Brucellosis

nasal and pharyngeal smears

##### faecal analysis

parasitological study

mycological study

bacteriological study

urine culture

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#### HANDLERS OF CHEMICAL PRODUCTS

#### - Clinical Work History

##### 1. Identification of Work Place

Detailed description of the products used, the methods of work and the conditions of humidity, temperature and ventilation of the work areas.

##### 2 Work History

Special attention to those former work places which may have involved exposure to chemical substances.

##### 3 Personal History

Special attention to allergic swelling, dermatitis and respiratory ailments.

#### 4 Clinical Exam

Special attention to the presence of breaks in the cutaneo-mucous barrier, dermatitis, respiratory system ailments, diseases of the eyes or the ENT system, which could contraindicate the use of equipment and clothing for personal protection.

Special attention to the early indicators for the detection of the physiopathological effects resulting from the exposure to different toxic agents.

#### -- Complementary Examinations

Analytic

biochemical

specific markers for the different toxins

#### 3.1.5 COMPLEMENTARY SUBPROFILES

Enlarging on the basic profile, these complete the information needed to provide continued evaluation of the effect on the worker's health of another series of factors:

occupational illness  
industrial accident  
non-industrial disease

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The broad variability of these factors results in the diversity of the specific examinations and the complementary tests needed to adequately support them, including also the specific profiles used to support the efficacy of programs of preventive medicine.

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#### 3.2 CLASSIFICATION OF MEDICAL EXAMINATIONS

In consideration of the previous outline and in agreement with the legal norms in force, the following protocols for medical examinations are distinguished:

examination at start of job  
ordinary periodic exam  
special periodic exam  
exam on return to job  
exam at termination of employment

special examination:

- change in place of work
- at the request of the worker
- at the request of the personnel director
- at the advice of the Medical Service
- examination after having ended employment
- examination for workers occupationally exposed to ionizing radiation

### 3.2.1. Examination at the start of a job

#### Goals

- to ascertain the ability of the applicant to work
- to determine the worker's fitness for a specific task
- to determine whether the examinee shows any predisposition to illnesses which could appear or be aggravated as a consequence of those tasks to be performed

#### Subjects

Any person who will work in a CIEMAT facility, whatever their contractual relation with the Agency. These include people going to work in the Madrid facilities as well as those facilities of the Agency which are located without the capital.

#### Administrative Requirements

- The Personnel Director must request the exam
- The Personnel Director must fill in the worker's identification slip
- Work place identification slip to be filled in by the Personnel Director, the office or institution where the applicant will go, and the Service of Social Security and Industrial Health.

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### 3.2.2 Ordinary periodic examinations

#### Goals

- To monitor the health of the worker to provide early detection and to individualize risk and health factors related to their job.
- To provide a general assessment of the worker's health
- To supervise care of and monitor pathological states which have already been discovered.
- To provide continued appraisal of the suitability of the psychophysical working conditions
- To promote health education, cultivate the Medical Service-Worker relationship, and promote the normal

harmonic and balanced development of a person in their work environment.

#### Subjects

-Those referred to in the heading for Exam at start of job, as long as they have been employed for at least a year.

#### Period

-Annual

#### Administrative requirements

-Medical Service scheduling

#### 3.2.3. Special Periodic Exam

#### Goals

-The same as those described in the section corresponding to ordinary periodic exams, provided that the specific risks of the place suggest examinations be carried out at more frequent intervals.

#### Subjects and Period

-Workers professionally exposed to ionizing radiation (Category A): every semester.

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-Workers professionally exposed to:  
organic solvents  
inhalation of gasses, soils, dust and or vapors  
which are toxic or to the action of toxic  
solids or liquids  
subject to constant or large physical forces,  
period set, by doctor's judgement, according to degree of  
exposure.

#### Administrative Requirements

.Schedule set by request of Medical Service

#### 3.2.4. Examination on Return to Work

#### Goals

-To establish the worker's state of health after an absence which may be assumed to have changed their fitness for work.

## Subjects

Any worker who has been away for more than 30 days, apart from absences resulting from vacations, and only when considered necessary by a doctor.

## Administrative Requirements

-schedule set by Medical Service, previous request on the part of the Personnel Director, who must specify the reason and duration of the absence.

### 3.2.5. Examination at Termination of Employment

## Goals

-To evaluate the worker's state of health at the moment of terminating their relationship with the Agency.

## Subjects

-Every worker who is terminating employment.

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## Administrative Requirements

-schedule set by the Medical Service, previous request by the Personnel Director giving the reason and the date of termination of work.

### 3.2.6. Special Examination

#### 3.2.6.1 Examination for change of work place

## Goals

-to evaluate the fitness of the worker for the new work place

## Subjects

-Those workers who for different reasons change their work place

-When work place is changed this can be suggested by the Medical Service on the discovery of a health condition which is not compatible with the worker's present employment, whether the ailment is of industrial origin or not.

## Administrative Requirements

-request for medical exam on the part of the Personnel Director

-Work place identification slip, to be filled out by the Director of Personnel, the office or institute where the worker is going and the Service for Social Security and Industrial Health.

-certificate of fitness for the work place, in which the limitations which necessitate the change are made explicit, in those cases when this is initiated by the Medical Service.

#### 3.2.6.2. Examination at the request of the worker

##### Goals

-To answer the needs of the worker in case possible work-related pathologies are suspected or in the case of pathologies which may be aggravated by working.

##### Subjects

-Any worker requesting such an examination.

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##### Administrative Requirements

-appointment from the Medical Service, previous request by the interested party.

#### 3.2.6.3. Examination at the request of personnel director

##### Goals

-To answer the needs of orders from above, transmitted through the Personnel Director, in case of suspected habits, behavior or pathologies which might interfere with the normal work performance.

##### Subjects

-Any worker found in the above mentioned circumstances.

##### Administrative Requirements

-request for medical examination from the Personnel Director

#### 3.2.6.4. Examination on the advice of the Medical Service

##### Goals

-To evaluate the state of health of the worker in the following circumstances:

- following an occupational illness or accident
- when, in view of the results of a periodic exam, this is considered necessary,



- when there is knowledge, from friends or family members, of the existence of any pathology which might interfere with the worker's performance.

#### Subjects

- Any worker in any of the above circumstances, on the advice of the Medical Service.

#### Administrative Requirements

- Appointment from the Medical Service.

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#### 3.2.7. Exam following termination of employment

##### Goals

- To maintain medical monitoring of specific workers who might expect long term health effects as a result of the specific hazards experienced during their employ.

##### Subjects

- Any such worker

##### Periodicity

- Based on the doctor's judgment, as a function of the different hazards cited.

##### Administrative requirements

- Appointment from the Medical Service

#### 3.2.8. Exam for workers professionally exposed to ionizing radiation

##### Goals

- Given the special nature inherent in the risks from exposure to ionizing radiation, and in view of the applicable legislative standards, to adapt the different protocols already described to the particular demands resulting from the cited exposure.

##### Subjects

- Workers who, because of their working situation, are, either habitually or occasionally, put at risk of exposure to ionizing radiation which could involve annual doses higher than 1/10 of the limits established for workers.

## Periodicity

### -Category A:

The members of this group are persons who, given their work conditions, may receive doses higher than 3/10 of some annual limit. Exam every semester.

### -Category B:

The members of this group are persons who, given their work conditions, almost certainly do not receive a dose exceeding 3/10 of any of the annual limits. Yearly exam.

## Administrative requirements

-In addition to the administrative requirements of each type of exam, the following are called for, as applicable:

- A request for Medical Classification from the Radiological Protection Service, in continuing cases.
- A copy of the Classification Slip filled in by the Radiological Protection Service, in continuing cases.
- Current dosimetric information, periodically supplied by the Radiologic Protection Service, in all cases.
- Information from the Radiological Protection Service, prior to the Special Examination, giving the relevant radiological circumstances, in cases when the said exam is motivated by the limit(s) having been exceeded or from accidental exposure.

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## 3.3. Evaluation of the medical examinations

The medical examinations which have been described have as their ultimate result the evaluation, from the medical point of view, of the worker's health and fitness for the position of employment held. For this the doctor relies on the information submitted by the aggregate of the Clinical Work History and the results of the different complementary examinations. In those cases when the corresponding profile requires specialized study or this has been asked for independently, the results of such a study are also included in the final evaluation of the examination.

To conclude the evaluation process, a Medical Report is produced, which includes the results of the clinical exam and of the complementary tests, the clinical judgement, the

pertinent medical recommendations and the corresponding Judgement of Fitness for the Work Place.

This Judgement of Fitness places the worker in one of the following categories:

-Fit : A worker whose psychophysical condition is sufficient, from the medical point of view, for the fulfillment of their duties.

-Fit, with restrictions: A worker whose psychophysical conditions are, in general, sufficient for the duties assigned, but still there are medical reasons to limit certain tasks which are not essential to the performance of their specific job. These restrictions can be either Temporary or Permanent. In the latter case, on the advice of the Medical Service, a Change of Position can be suggested, finding a position which is more appropriate to the special conditions of the worker.

-Unfit - A worker whose psychophysical condition is not adequate, from the medical point of view, for the fulfillment of their job. In this case, the medical Service can also suggest a Change in Position.

As concerns those workers occupationally exposed to ionizing radiation, their classification, from the medical point of view, is according to that established in the current Regulation on Protection of Health from Ionizing Radiation:

-Fit. A worker who can fulfill those activities involving the exposure hazard associated to the work place.

-Under observation - A worker who is undergoing medical tests to determine their readiness to be returned to a place of work which involves a known exposure hazard.

-Unfit. A worker who must avoid work which involves a known exposure risk. The declaration of unfitness of a worker

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will be based on the current standards for disability and occupational illnesses.

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### 3.4 Administrative Procedure

The administrative procedure involved in medical examination includes:

#### 3.4.1. Appointment

-A request from the Personnel Director is required in the following cases:

- Exam at the start of working
- Exam on return to working
- Special exam for change of work place
- Special exam at the request of the Personnel Director
- Exam on terminating employment.

This request is submitted on the form Request for Medical Examination (Solicited de Reconcimento Medico)(document no. 1) which must be accompanied by the Worker Identification Slip (Ficha de Identificacion del Trabajador)(doc. no. 2) in the case of an examination for starting work, and by an Identification of Work Place Slip Ficha de Identificacion del Puesto de Trabajo)(doc. no. 3) in the case of examinations on starting work and in special cases for change of working position.

-A request from the subject is required in the following cases:

- A special exam at the request of the worker.
- An exam following termination of employment.

This request is submitted on the Request for Medical Examination form (Solicited de Reconocimiento Medico) already mentioned.

-For workers occupationally exposed to ionizing radiation, in addition to the request for medical exam from the Personnel Director, a request from the Radiological Protection Service is required in the following cases:

- An exam when starting work.

- An exam when returning to work.
- A special exam for change of work position.

This request is submitted on a Request for Medical Classification form (Solicited de Clasificacion Medical) (form PR-X7-02-08).

Further, a copy of the Classification Slip (form PR-X7-02-01) filled in by the Radiological Protection Service, is required in the following cases:

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- Examination when starting work
- Ordinary periodic examination, special periodic exam, exam on returning to work, if the conditions of work have changed.
- Special exam for change of work position.

In the special exam motivated by exposure radiation exceeding the established limits, or by accidental exposure, a report is required of the Radiological Protection Service which gives the relevant radiological details.

The Medical Service must rely on the Dosimetric Report applicable to each worker, which is periodically supplied by the Radiological Protection Service.

The formal appointment is issued in all cases by the Medical Service on the form Medical Examination Appointment (Citacion a Reconocimiento Medico) (doc. no. 5), produced in duplicate, one copy filed in the Service archives. This document is accompanied by a Information Sheet for the subject (doc. no. 6) and, in the case of an examination at the start of work, a Medical Questionnaire (doc. no. 7).

This appointment is sent to the subject at his place of work or, when applicable, to her home, approximately 15 days in advance, in order that the subject can reply if the date arranged is inconvenient, in which case a new appointment is made, issued a month in advance. In case the second appointment is not attended, this is made known to the Site

Head at the worker's place of employment, and a copy is filed in the subject's medical history.

Each trimester, the Service sends the Personnel Director the form List of Workers not Appearing for Medical Examinations (Relacion de Trabajadores no Presentados a Reconocimiento Medico)(doc. no. 8), which is produced in duplicate, the original going to the Personnel Director, the copy to the Service archives.

#### 3.4.2. Course of the Examination

The different phases and tests of an examination are shown on the form Medical Examination - Procedure Sheet (doc. no. 9), which the subject receives on arriving at the Service. In each case the different procedures are carried out based on the relevant profiles and subprofiles, without prejudice to those complementary procedures which the doctor may perform based on her own judgement during the course of the medical appointment. This document is filed in the Service archives following the examination, to provide an internal control of Service activities. Additionally, each of the complementary tests carried out is indicated on the corresponding forms:

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- Record of ECG (doc. no. 10)
- Record of Radiodiagnosis (doc. no. 11)
- Record of Spirometry (doc. no. 12)
- Record of Audiometry (doc. no. 13)
- Record of Vision Test (doc. no. 14)
- Record of Ultrasound Exam (doc. no 15)
- Record of Clinical Analyses (doc. no 16).

When these special studies are requested, the corresponding form for Specialist Referral (doc. no. 17) is issued, in duplicate, with the subject receiving the original and the copy filed in the Service archives.

#### 3.4.3. Distribution of the Examination Results.

The results of the medical examination are presented in the Medical Report form (doc. no. 18), which is duplicate, the original being given to the subject and the copy filed in the subjects Medical File.

In addition, the Certificate of Fitness for Employment (doc. no. 19A), is filled out, including possible restrictions that may be imposed, in the following cases:

- Exam on starting a job
- Exam on the return to work
- Special exam for a change of working position
- Special exam at the request of the Personnel Director
- In any other case when some limitation of fitness is found, or when the worker has been declared "unfit".

Every restriction which is only temporally imposed implicitly implies a review by the Medical Service of the Certificate of fitness for the job specified.

This form is duplicate, the original being sent to the Personnel Director and the copy filed with the subjects' Medical File. Whenever there is some limitation of fitness or the worker is declared "unfit", a second copy is sent to the office or facility where the subject is employed.

-In addition, when the medical examination has detected some irregularity in the work place which may impact the health of the worker, this circumstance is brought to the attention of the Service of Industrial Health and Safety, so that the necessary investigation may be put underway.

-In the Medical Exams for workers occupationally exposed to ionizing radiation, an additional Certificate of Fitness for the Work Place (doc. no 19b) is prepared, classifying the worker in one of the following categories: Fit, Unfit, Under Observation. This form is also duplicate, the original being sent to the Personnel Director and the second put in the subject's medical file. When the classification is Unfit or Under Observation, a copy of the classification is sent

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to the Radiological Protection Service and another to the office or facility where the worker is employed.

When a previous request for Medical Classification has been made by the Radiological Protection Service, the Medical Service classifies the worker in one of the three categories mentioned, forwarding the completed original of the request form to the Service, and putting a copy in the subject's medical file.

Also, whenever for any reason the Radiological Protection Service changes the classification of any worker occupationally exposed to ionizing radiation, the Medical Service must be immediately notified of this change.

#### 3.4.4. Medical examination of non-CIEMAT staff at CIEMAT

The administrative procedure for medical examinations given to workers at CIEMAT employed by outside contractors is somewhat different from that discussed up to now:

##### -Appointment

- This requires a request to the General Technical Secretary of CIEMAT from the unit where the worker will provide services.

The Secretary will forward the request to this Service [Medical ?] using the Request for Medical Examination form (doc. no. 1), which should be accompanied by the appropriate following form(s):

- Worker Identification Slip (doc no 2), when this is an exam at the start of a job;
- Work Place Identification Slip (doc no 3) when this is an exam at the start of work or for a change in work place;
- Radiological Hazards Slip (doc no 4) for those workers occupationally exposed to ionizing radiation, and when the exam is at the start of work, and in every case where the radiological conditions at the relevant work place have altered.



All this information is handled by the appointments office of the General Technical Secretary.

In addition, the Medical Service should have, in all necessary cases, the filled in Radiological Logbook, or when there is none, the worker's completed Dosimetric History.

The formal procedure of an examination appointment proceeds as usual.

-The results are sent where required.

- The original of the Medical Report (doc no 18) is automatically sent to the home of the subject, with a copy being placed in their medical file.

The original of the Certificate of Fitness for the Work Place (doc. no 19 c and or 19 d), and, when relevant, the Radiological Logbook, filled in as necessary, are sent to the unit requesting the examination by the General Technical Secretary.

#### 4. REMEDIAL MEDICINE

Alongside the purely preventive aspect of Industrial Medicine, we must not forget the remedial aspect, which consists of a program of services designed to answer the workers' needs for medical attention which result from work accidents, occupational illness or any other disease.

##### 4.1 Work Accidents

##### 4.1.1. Defining the concept

The General Social Security Law of 30 May 1974 defines a work accident as: "Any physical injury which the worker suffers during or as a consequence of work done for another person".

In this definition there are two provisions which clearly restrict the concept:

1. "Physical injury": which in its fullest sense is understood as an illness or disease which appears suddenly as a result of the work, as well as diseases which appear gradually or are not immediately discovered, which are not

included in the Occupational Illness Handbook, but are in fact the result of working.

2. The establishment of causality: In its full sense, this is understood as an accident occurring as a result of work, but not as an inevitable consequence of work.

More explicitly, the General Social Security Law expressly considers the following to be work accidents:

- 1- Accidents suffered by the worker during or as a result of voluntarily carrying out trade union duties.
- 2- Accidents suffered going to or returning from a place where assigned tasks are fulfilled, as well as going to and from the work place (accidents "en route").
- 3- Accidents occurring during or as a consequence of tasks which, even though they may be different from the usual work, the worker performs in response to orders or on her own, to promote the firm's smooth operation.
- 4- Those taking place during rescue operations, or similar activities, whenever these are connected with work.
- 5- Illnesses the worker contracts as a result of fulfilling of his responsibilities, even when these are not classified as occupational.
- 6- Illnesses or medical problems contracted by the worker prior to employment, when they are aggravated by the injury resulting from the accident itself.

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#### 4.1.2. Giving assistance

Those receiving attention:

The following can be given health care for work accidents:

- Workers who, although performing their duties at a CIEMAT installation, do not belong to its work force. In this case, the assistance rendered will consist entirely of first aid, follow on assistance being left to the relevant Insurance Agency.

- Workers on the CIEMAT staff: in this case, CIEMAT, operating as a self insured business with regard to temporary disability resulting from work accident or occupational illness, is obliged to cover the expenses of treatment, either by its own doctors or doctors under contract, and must also provide financial compensation for the effects of the illness or disability.

This implies that, for all members of the staff who temporarily do not work in a CIEMAT installation but are required to physically perform their tasks elsewhere, assistance in case of accident is provided 'in situ' by the relevant medical establishment (with expenses covered by CIEMAT), with follow on health care being provided by the Medical Service whenever possible.

-Content of health care.

The most complete health care possible is given to the worker (article 11 of the General Regulation of Health Care), and includes:

- emergency care 'in situ';
- medical and surgical treatment of resulting injuries or pains, supply of drugs, and, in general, all of the diagnostic and technical means which are considered necessary by attending medical staff
- the rehabilitation treatment needed to obtain the most complete cure possible, as rapidly as possible, and to obtain the best fitness for work. This treatment

may be continued after the patient's release, whether or not aftereffects are present, in any case where this results in the best recovery and fitness for work. /49

- supply and normal replacement of prosthetic and orthopedic equipment which is considered necessary, and of vehicles for invalids.
- plastic and reconstructive surgery when necessary, following the healing of wounds resulting from work accident

which have left deformities or mutilation which result in a major change to the physical appearance of the victim or which impede the recovery necessary for subsequent employment.

This health care is provided for the full time required by the illness (article 12 of the above mentioned Regulation).

Any care which cannot be provided by its own doctors, is provided by health organizations under contract to the Service:

- the Rubber Clinic, for traumatic injury
- the La Paz Hospital Burn Center, for burn emergencies
- the Iron Gate (Puerta de Hierro) Clinic, for other common ailments
- the Radiopathology Center of the Gregorio Maranon Hospital for radiological accidents possibly involving irradiation and or personal contamination.

#### 4.1.3. Administrative procedure

Each accident, in addition to the care already described, involves an administrative procedure, not only on the part of the Medical Service, but also on the part of the Personnel Director and of the Service of Industrial Health and Safety:

- Outside workers at CIEMAT

Medical care provided is recorded on the form Record of Work Accident (Comunicacion de Accidente de Trabajo) (form no 20), which presents all the details of the circumstances and data needed to facilitate the subsequent completion of the Official Accident Report (Parte Oficial de Accidente de Trabajo) by the relevant body, as well as the details of the health care provided.

This document is produced in triplicate, the original going to the subject, one copy being put in the Medical Service archives and the remaining one being sent to the

Service of Industrial Health and Safety so that it can begin an investigation.

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Additionally, all medical attention provided is recorded in the relevant Records of consultation or complementary examination and, when this care requires emergency evacuation using one of the Service ambulances, this is also recorded in the Record of Evacuaciones (Registro de Evacuaciones) (doc. no 21).

-Workers on the CIEMAT staff:

This administrative procedure is basically different, depending on whether the work accident results in a temporary Work Disability or whether, on the other hand, no such disability results.

- Accident without medical absence:

Any work accident which does not result in an absence, is recorded on the official form Record of Work Accidents not Resulting in Medical Absence (Relacion de Accidentes de Trabajo Occuridos sin Baja Medica)(doc no 22), which is provided in duplicate, the original being sent to the Personnel Director for its monthly summary and a copy staying with the Medical Service.

Additionally, in each case the form Work Accident Slip (Ficha de Accidente de Trabajo)(doc no 23) which gives the detailed circumstances of the accident, is filled in. This document is produced in duplicate, the original being sent to the Service of Industrial Health and Safety for subsequent investigation of the accident, if this occurs, and the copy being filed in the Service archives.

These data and the medical care provided are recorded in the work accident register which is a part of the worker's Medical File, and in the corresponding forms:

- Record of Medical Interviews (doc no 24)
- Record of Nurse Visits (doc no 25)
- Record of Electrotherapy and Rehabilitation (doc no 26)

As well as in the other records of complementary examinations and in the corresponding record of evacuation, if this occurs.

In the same way, the care given is recorded on the Record of Care for Work Accidents and Occupational Illnesses form (Registro de Asistencia por A.T. y E.P.)(doc no 27), on the basis of which the official forms Care Activities Provided (Actividad Asistencial Desarrollada)(doc no 28) and Preventive Measures Carried Out (Actividad Preventiva Realizada) (doc 29) are prepared, copies of these being put in the Service archives and the originals being sent to the Personal Director for their use.

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#### Work Accident Resulting in Medical Absence:

Every work accident or occurrence which results in a temporary work disability of at least one day (in addition to the day on which the accident happened), is recorded on the official form Work Accident Record (Parte de Accidente de Trabajo)(doc. no 30), prepared in duplicate, the original being sent to the Personnel Director for their later use and the copy remaining with the Medical Service.

Together with this document the corresponding Report of Medical Absence form (Parte Medico de Baja)(doc no 31) is filled in, which is prepared in quintuplicate, one of the copies going to the subject, another filed with the Service, and the three remaining going to the Personnel Director for their subsequent use.

When, in the doctor's judgement, special care is required, which is not available at the Center, the Specialist Referral form (Remision a Especialistas) is filled out, prepared in duplicate, one going to the subject and the other to the Service archives.

The same administrative procedure is used for the Record of Medical Leave (doc. no. 32), which explicitly states the cause of the leave and possible long term

effects. Further, the Personnel Director must be sent the corresponding form Record of Leaves or Dismissal for Workers Involved in Accidents (doc. no. 33) for use in their monthly report, which is prepared in triplicate, with one copy going to the Service of Industrial Health and Safety and the other [sic] being put in the Service archive.

Additionally, in each case the forms Work Accident Slip and Record of Care for Work Accidents and Occupational Illnesses are filled out, and the official forms Care Provided and Preventive Measures Taken, are also filled in, being treated in the same way as in cases of work accidents not resulting in medical leave.

The statistical data from these accidents is recorded in the Record of Work Accidents and Occupational Illnesses (doc no 34) on the basis of which the monthly report Morbidity and Mortality Data for Work Accidents and Occupational Illnesses (Datos de Morbo-mortalidad por A.T. y E.P.)(doc no 35) is prepared, which is supplied in triplicate, one copy for the Service archives, the other going to the Service of Industrial Health and Safety, and the original to the Personal Director for their use in INSALUD ("Industrial Health").

All the information generated in this process is included in the records of work accidents in the Worker Medical File, and in the corresponding forms:

- Record of Medical Visits
- Record of Nurse Visits
- Record of Electrotherapy and Rehabilitation

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Additionally, it is included in all the other records of complementary examinations and, if appropriate, in the corresponding Record of Evacuation.

In addition to completing the documentation described, in the case of accidents occurring in the work place or at other sites during the working day (that is to say,

excluding "en route" accidents) which involve some of the following circumstances:

- death of worker
- independently judged serious or very serious
- involve more than four workers (whether or not all are members of CIEMAT staff); the Urgent Notice is prepared for the internal use of the Personnel Director, who is obliged to notify in turn, within 24 hours, the Provincial Labor Director, with a copy going to the Service for Industrial Health and Safety so that it can begin a timely investigation as soon as possible.

Some work accidents involving medical leave involve circumstances which require complementary administrative treatment:

- The time allowed for worker sick leave is exceeded: in this case the corresponding form for Medical Leave is filled out, so that the case will be treated as a Temporary Disability.
- Death as a result of accident. In this case the Official Medical Death Certification form (Certificado Medico Oficial de Defuncion) is prepared in duplicate, specifying the cause of death. Additionally communication is made to the Judicial Authority so that it can initiate appropriate legal proceedings.

As has been described, an internal Urgent Notice is prepared for the Personal Director, in addition to its use in the corresponding weekly report of leaves or accidental deaths.

-Permanent non-incapacitating injuries. This circumstance is recorded in the Medical Leave form already described. Given that the said injuries result in compensation according to their gravity, the Medical Service prepares the necessary request using the official form Clinical Work Report (doc no 36), supplied in duplicate, with the original



being sent to the Personnel Director for subsequent use, and the copy remaining in the Service archives.

-Permanent incapacity which may be certified by the National Social Security department [or perhaps "National Health and Safety Institute", the abbreviation is INSS]. In this case the administrative procedure is identical to that described in the previous section.

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In those cases of permanent non-incapacitating injury or permanent partial incapacity for the usual profession of the worker, the Medical Service proposes to the Personnel Director a change in position by means of the Certificate of Fitness already described.

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#### 4.2. OCCUPATIONAL DISEASES

##### 4.2.1. Definition and application of the concept

The General Social Security Law defines occupational disease as: "An illness contracted as a consequence of work done for another person, in activity which is specified in the manual which is approved as a result of implementing this Law, and which is caused by the action of those elements or substances which the said manual mentions in connection with every occupational illness". The above mentioned Handbook of Occupational Diseases presently valid was published by Royal Decree 1995/1978, on 12 May.

Those illnesses which, although they are not included in the manual, may have been contracted by the worker during the course of her work, always provided that it is shown that the illness had as its sole cause the performance of this work, have, in the GSSL, the status of Work Accidents. In this way, no worker is deprived of the appropriate protection.

##### 4.2.2. Providing care

-Recipients of care

When CIEMAT is recognized as a self insured enterprise, all members of the CIEMAT staff will be eligible for the

health care and economic protection following on any occupational illness.

-Content of care

The concept of occupational illnesses, although it is based on medical criteria, is a typical legal concept which defines an "administrative situation" in the Regulations for Provision of Social Security.

Based on this, the content of the health care provided is focussed first on all on the prevention of the illnesses in question, all of what has early been said on the section on Preventive Medicine being relevant to this. When, in spite of the use of adequate preventative measures, in the course of industrial medical examinations or otherwise some symptom of an occupational illnesses found, the worker is placed under observation for study and diagnosis of the illness.

During this period, which is not to exceed 6 months, all health care cost is charged to CIEMAT as a self insured entity. At the end of the observation period, the following situations may occur

-The diagnosis is not confirmed, in which case the worker is considered fit for his regular job, but is still subject to special monitoring by the Service in order to watch for and control any future problem which might induce reconsideration of the original diagnosis.

-Confirmation of the diagnosis of early symptoms of an occupational illness, which may be controlled by changing the worker's job; in this case the Director suggests the appropriate change, and the worker is also subject to special follow up and monitoring.

In case the said change of work position is not given consideration by CIEMAT, and, with the agreement of the Industrial Inspector, the worker leaves CIEMAT, she receives all the health care necessary for full treatment of the

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disease, for a period not to exceed 18 months, as long as no other job is taken.

-Confirmation of the diagnosis of occupational illness; in this case the health care provided is the same as in the case of an industrial accident, while the worker is given temporary leave from work.

Health care charged to CIEMAT includes all the care that the Service itself can provide with the means at its disposal, as well as whatever additional care is considered necessary and has been provided by outside facilities or institutions (specialists, clinics and INSALUD health centers specializing in occupational diseases).

#### 4.2.3. Administrative procedure

All health care provided by the Service itself is recorded in the appropriate Records of Consultation and the records of the different complementary tests, as well as in the records of assistance for work accidents and occupational illnesses and the records of work accidents and occupational illnesses, and in the official forms for the provision of health care, preventive care, and morbidity and mortality data for work accidents and occupational illnesses, which are handled in the same way as for work accidents.

When, in a doctor's judgement, the attention of specialist facilities or of health institutes is required, the form for Referral to Specialists is filled out, which is provided in duplicate, giving the original to the subject and leaving the copy in the medical files of the worker.

Once the diagnosis of an occupational illness has been established, this is sent to INSALUD using the official form for Declaration of Occupational Illness (doc. no. 38), is issued in triplicate, putting one copy in the Service archive, sending the other to the Service of Industrial

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Health and Safety, and the original to the Personnel Director for their use.

The occupational illness can result in a number of separate situations which themselves involve differing administrative procedures:

-Observation period

This period starts with the completion of the relevant Certificate of Fitness "under observation", which is issued in duplicate, the original going to the Personnel Director and the copy archived with the Service.

The period comes to an end when a second Certificate of Fitness is issued, with the qualification "fit", with or without restrictions, or "unfit", following the same procedure as above.

-Change of place of work:

When this change is considered necessary following an observation period, this situation is recorded in the relevant Certificate of Fitness issued at the end of the observation period.

When there has been no such observation period, the Medical Service proposes such a change in work place by means of the relevant Certificate of Fitness, which follows the usual administrative procedure.

-Temporary work disability (Incapacidad Temporal =ILT):

The diagnosis of occupational illness which requires medical leave is recorded in the official form Instance of Occupational Illness (Parte de Enfermedad Profesional)(doc. no. 39), issued in triplicate, sending the original to the Personnel Director, a copy to the Service of Industrial Health and Safety and filing the copy in the Service archives. Additionally, this situation involves the issue of the relevant form for Medical Absence, which follows the same administrative path as described in the section on work accidents.

-Provisional disability:

When the maximum time allowed for a temporary disability has been used, a Medical Leave form is issued, which formalizes the change to a situation of provisional incapacity, following the administrative procedure already described in the section on work accidents.

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-Permanent non-disabling injuries

This involves the identical administrative procedure used in the case of a work accident.

-Permanent disability subject to confirmation by the Social Security service:

This requires administrative treatment identical to that described in official form Instance of Occupational Illness Resulting in Permanent Disability or Death (Parte Profesional Para Incapacidad Permanente o Muerte )(doc. no. 40), which is issued in triplicate, the original being sent to the Personnel Director for later handling, a copy to the Service of Industrial Health and Safety and a copy being placed in the Service archive.

-Death resulting from occupational illness:

This requires the preparation of the relevant form Instance of Occupational Illness Resulting in Permanent Disability or Death, which is treated as mentioned in the previous section.

If the deceased worker was on temporary leave at time of death, it is necessary to issue the relevant Instance of Dismissal for Medical Reasons, for death, which is treated in the usual manner.

All the information generated in this process is recorded in the register of occupational illnesses in the worker's medical file.

-4.3 Illnesses not related to work

This facet of medical care has the goal of responding to the workers' need for medical care.

This activity brings clear benefits, chief among which are:

- Convenience for the worker, who finds a large part of their medical needs satisfied at the work place.
- Establishing a close relationship between the doctor and the worker, which is absolutely necessary to attain the basic goals of Industrial Medicine.
- A contribution to National Health through the general preventive health programs and the health education of the population.
- Reduction of worker absenteeism resulting from common illnesses.

#### 4.3.1. Recipients

All CIEMAT staff.

All workers from outside CIEMAT and temporary personnel at the center are also eligible for medical treatment for emergencies or any other illness which appears during their stay at the center.

#### 4.3.2. Description of the care provided

- Emergency medical care. This is provided whenever any acute medical condition occurs during the work day, including late shifts, throughout the work week.
- Ordinary visits to the doctor - this includes the diagnosis and treatment of common illnesses which the workers might have, the following up of chronic illnesses, the evaluation of the health of the worker, and whatever other problem of a physical or psychological nature which may affect the worker or his family.
- Nurse visits. Includes the application of curative measures, the administration of medical injections, aerosol therapy, and whatever other activities for which the means are available.
- Electrotherapy and rehabilitation. This is provided both at the instance of the Medical Service and at the voluntary request of the worker.

- Emergency evacuation. This is provided by the ambulances belonging to the Agency in all cases when it is required.
- Performance of complementary tests. These are carried out at the request of the Service or by the spontaneous request of the worker.
- Referral for specialized study. This occurs following the confirmation of the existence of a common disease which is suitable for study by specialists in the Social Security.
- Home or hospital visits to ill workers. These are carried out on the judgement of the Service or at the request of the worker or his family.
- Dealings with public or private health institutions. These are provided on the judgement of the Service or at the request of the worker, and are designed to facilitate and simplify, when necessary, the provision of medical services away from the work place.
- Social and psychological care needed for the worker as a result of a work related or non work related illness.

#### 4.3.3. Administrative procedure

All the care activity is recorded in the medical file of each worker, and, for purposes of internal control of the activities of the Service, in the corresponding records of consultation, complementary tests, electrotherapy and rehabilitation and evacuations.

In the case of complementary examinations, the prior completion of the relevant Request Sheet form is required. The results of these examinations are sent to the subject using the relevant Communication of Results form (Comunicacion de Resultados)(doc no 41) which is prepared in duplicate, the original being sent to the subject and the copy left in their medical file.

When in a doctor's opinion it is considered necessary to refer the worker to other facilities or health

institutions, the relevant Request for Health Care form (Petiticion de Asistencia Sanitaria)(doc. no. 37) is filled out in duplicate, giving the original to the subject and the copy being put in their medical file.

When a worker takes ill during the work day, and the medical advice is to rest at home, this situation is recorded in the form Instance of Brief Absence for Medical Reasons (Parte de Aucencia Parcial pro Causa Medica)(doc no 42), which is prepared in triplicate, sending the original to the relevant office or facility, giving one copy to the subject, and putting the other in the Service archive.

Similarly, when ambulance evacuation is required, this is recorded in the form Record of Evacuations.

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#### 4.4 Emergency Situations

The Medical Service provides complete service in any emergency endangering the health of its personnel, be it from a conventional hazard or one involving radioactivity.

##### 4.4.1. Missions of the medical service

- To organize the provision of medical and health care in any emergency situation.
- To supervise the search and rescue operations from the medical point of view.
- To provide first aid "on the spot".
- To manage and coordinate the possible evacuation of the injured to specialized medical centers.
- To participate in simulated emergencies organized by the Protection and Emergency service.
- To organize and present first aid training courses.

##### 4.4.2. Available resources

- Personnel: the Service has three doctors and three technical health assistants available throughout the work day. Outside these hours there is a Watch Service every work day during the late shift, which is covered by a THA,



with the three doctors being available by use of the telephone.

- Technical: The Service mobilizes all of its facilities and technical equipment for any emergency situation, with special attention given to the Decontamination Room for radiological accidents which involve personal decontamination.

It also has available two ambulances, provided with oxygen and breathing equipment, stretchers and an emergency pharmacy. One of the ambulances also has a radiocommunication system and the other lead shielding in the passenger compartment. Additionally, for specialized medical care, the Service can call on the arrangements already mentioned in the section on work accidents.

#### 4.4.3. Responding to an emergency

The Medical Service is activated, in accordance with the CIEMAT General Emergency Plan (General Procedure no. 8 = Procedimiento General no. 8) on the declaration of any emergency situation, when notified by the Head of Shift at the Control Center, making use of the dedicated emergency telephone line.

From this moment its activities are supported by the Emergency Action Groups and the rest of the Support Services described in the CIEMAT General Emergency Plan.

General coordination of emergency activity falls to the Emergency Director, particularly regarding the evacuation of injured personnel to other health facilities. /62

This evacuation, if it becomes necessary outside of normal working hours, is performed by the Health Protection Service. The addresses and telephone numbers for the relevant facilities are:

-Trauma  
Rubber Clinic  
Calle Juan Bravo 49  
Tel 402 08 65, 402 61 00

-Burn

Burn Center (Centro de Quemados)  
Hospital LA PAZ  
Paseo de la Castellana 261  
Tel: 734 26 00

-Conventional illness

Clinic Puerta de Hierro  
Calle San Martin de Porres 4  
Tel 314 40 40    316 22 40    316 23 40

-Radiological accident

Centro de Radiopatologia  
Hospital GREGORIO MARANON  
Calle Doctor Esquerdo, 46  
Tel 586 80 00 ex. 8180

Routes for quickest possible access to the different aid centers are described in figure 6 of the Appendix III of the CIEMAT General Emergency Plan.

All of the medical and health measures taken are recorded in the appropriate registers of the Service, and in the documentation generated by the different situations.

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## 5 DOCUMENTATION

The large amount of information generated by the activities of the Medical Service, as well as the different sources and destinations it takes, make the provision of adequate information services support essential.

All documentation for the records must meet certain basic requirements:

- It must be as complete but at the same time as simple a record as possible, constituting a faithful representation of the medical changes in the worker population.
- It must be easy to access at any time, whenever the Service itself needs some stored information.
- It must result in a system which is capable readily exchanging information with other agencies involved, both within and without CIEMAT.
- It must provide a basis for the internal evaluation of Service activities.

- It must form an orderly and durable archive which is adequate to both legal and material requirements.

This documentation is stored and cared for by the Medical Service, and is subject to privacy standards set by the Occupational Medicine Secrecy Act (Secreto Medico Profesional), and this privacy is preserved, in the case of individual medical files, for at least thirty years following the end of employment.

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#### 5.1. Record documents

All the documents described are found in Supplement I to the Appendix of this manual. Below is a brief summary of their contents:

Documento No. 0: Medical File

-This is the basic records document for storing the medical work history of each worker. Its central core is the Clinical Work History, which is designed to the following requirements:

- It is specifically suited to the needs of Industrial Medicine.
- It provides a faithful record of all the medical changes in the worker, without needless complexity.
- It facilitates the fulfillment of the goals of epidemiological studies.
- Standardized as necessary to simplify its use in statistical work.

This Clinical History contains the following sections:

- Biographical data
  - identification
  - date of entry, leaving and death
  - type of health
- Work history
  - professional history
  - identification of work place
  - other simultaneous jobs

- Family history
- Personal history
  - diseases and surgery
  - habits
  - allergies
  - immunizations
- Personal interview
- Clinical examination
  - anthropometry
  - examination of organs and systems
  - general impression
- \_Complementary examinations
- Clinical judgement
- Medical recommendations
- Fitness for work

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Each successive examination includes fresh information relating to:

- Changes in biographical data, work history and the histories.
- Personal interview, clinical exam, complementary exams, clinical judgement, medical recommendations and fitness for work.

The Medical File also includes the following supplements:

- Work place identification slip
- A copy of the Classification Slip or Radiological hazard slip
- Individual dosimetric history
- A copy of the request for medical classification for new personnel
- Medical questionnaire
- A copy of all the medical specialist referral forms and subsequent information
- A copy of subsequent medical reports

- A copy of the Certificate of fitness
- A copy of the documentation generated in any work accident or occupational illness
- A copy of the forms requesting health care and of subsequent reports
- A copy of the notice of brief absence for medical reasons
- A copy of whatever other document is generated during medical follow up of the worker
- Individual records of:
  - work accidents
  - professional illness
  - absence for medical reasons
  - medical visits

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#### Document no. 1 Request for Medical Examination

- Identification data
- Type of appointment
- Origin of request
- Specific details
  - exam for return to work: reason and duration of absence
  - exam at end of employment: reason and date of end of employment

#### Document no 2 : Worker identification slip

- Identification data
- biographical data

#### Document no 3 Workplace identification slip

- identification data
- profession and work category
- office/facility
- program/area of activities
- physical location and telephone no.
- description of tasks (partial and full time)
- identified hazards
- work conditions: location, machinery, equipment, position, etc

Document no. 4: Radiological Hazards Slip

- identification data
- installation data (category, radiological hazards)
- professional data (category of occupational illnesses, radiological title, description of tasks)
- other occupational exposure to radiation
- medical exposures (therapy, x-ray, etc)

Document no 5: Certificate of Medical Examination

- end user
- place, date and time of certificate
- type of exam
- date issued (after 15 days)

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Document no 6: Medical Exam Information Sheet

- justification of exam
- arrangements for appointment
- recommendations to facilitate clinical interview (personal interview)

Document no 7: Medical questionnaire at the start of work

- identification data
- personal and family histories
- work history and occupational illnesses
- habits
- medical interview : organs and systems

Document no 8: List of workers not present for their medical exams

- worker identification
- type of exam
- dates of first and second appointment

Document no 9: Medical exam special requests sheet

- worker identification
- profile and type of exam
- complementary tests (specific supplement for lab tests)
- requesting doctor
- signature of responsible doctor and THA

Document no 10: Record of electrocardiogram

- date and order no.
- worker identification
- type of test
- operator signature

Document no. 11: Record of x-ray

- date and order no.
- worker identification
- type and number of exposures
- operator signature

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Document no 12: Record of respirometry

- Date and order no.
- worker identification
- observations
- operator signature

Document no. 13 Record of audiometry

- Date and order no.
- worker identification
- type of exam
- operator signature

Document no. 14 : Record of vision test

- Date and order no.
- worker identification
- observations
- operator signature

Document no. 15 : Record of

- Date and order no.
- worker identification
- type of exams
- operator signature

Document no. 16 : Record of clinical tests

\* Information containing:

- Date and order no.
- worker identification

-analytic tests performed and results

-source of request

Document no. 17 : Referral to specialists

-identification of specialist

-worker i.d.

-reason for consultation

-date

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Document no. 18: Medical report

-identification data

-summary of clinical history

-clinical judgement

-medical recommendations

Document no 19 : Certificate of fitness for work place

-worker and work place identification

-fitness for job

-restrictions

-suggestion of change of job

Document no 20 : Report of work accident

-worker and site identification

-details of accident following official form Report of Work  
Accident

-medical attention given

Document no. 21: Record of evacuation

-Date time and order no.

-worker identification

-destination

-observations

-driver signature

Document no 22: List of work accidents not resulting in  
medical leave

-A copy of the official form of the Ministry of Labor and  
social security (BOE num. 311, 29 Dec 1987)

Document no 23 : Work accident slip

-worker identification



-description of accident

-medical attention

Document no 24: Record of medical visits

-Date and order no.

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-worker identification

-reason, exam, clinical judgement and treatment

-doctor's signature

Document no 25: Record of visits to infirmary

-date and order no.

-worker identification

-type of care received

-assistant's signature

Document no 26: Record of electrotherapy and rehabilitation

-Date and order no.

-worker identification

-type of care

-operator signature

Document no. 27 Record of care for work accidents and  
occupational illnesses

-Date and order no.

-worker identification

-type of care

-operator signature

Doc. no 28 : Care activity provided

-A copy of the official form from the Ministry of Health and  
Consumer Affairs. INSALUD

Document no. 29 : Preventive activities performed

-A copy of the official form of the Ministry of Health and  
Consumer Affairs. INSALUD

Document no. 30: Report of work accident

-A copy of the official form of the Ministry of Labor and  
Social Security (BOE num. 311, 29 Dec 1987)

Document no. 31: Report of medical leave

-work accident/occupational illness

-worker and site data  
-date of accident or illness

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-date of leave  
-medical care data  
-diagnosis and prognosis  
-doctor's signature

Document no. 32: Report of medical dismissal

-work accident/occupational illness  
-worker and site data  
-date of accident or illness  
-date of leave

-date of dismissal  
-cause of dismissal  
-permanent effects  
-doctor's signature

Document no. 33: Report of dismissals or deaths as a result  
of accidents

-A copy of the official form of the Ministry of Labor and  
Social Security (BOE num 311, 29 Dec 1987)

Document no. 34: Record of work accidents and professional  
illnesses

-order number  
-worker id and SS numbers  
-diagnosis, gravity and type of treatment  
-dates of leave and dismissal and duration of temporary  
leave

Document no. 35: Morbidity and mortality data for work  
accidents and occupational illnesses

-A copy of the official form of the Ministry of Health and  
Consumer Affairs. INSALUD.

Document no. 36: Clinical work report

-A copy of the official form of the Ministry of Health and  
Consumer Affairs. INSALUD.

Document no. 37: Request for health care

- identification of facility or plant
- worker identification
- reasons
- date

Document no. 38: Declaration of occupational illness

- A copy of the official form of the Ministry of Health and Consumer Affairs. INSALUD.

Document no. 39: Report of occupational illness

- A copy of the official form of the Ministry of Health and Consumer Affairs. INSALUD.

Document no. 40: Report of occupational illness involving disability or death

- A copy of the official form of the Ministry of Health and Social Security.

Document no. 41: Communication of results

- worker identification
- expected length of absence

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## 5.2 INFORMATION TRANSFER

In addition to the documentation described in 5.1., the Medical Service generates and receives another lot of information from different sources both within and without CIEMAT. All of this requires a method of communication which is analyzed below.

### 5.2.1. Personnel Director

Transfer from the Personnel Director to the Medical Service

#### 1. Request for medical exam

- content

- worker id.            name and forenames  
   national identification number
- nature of exam: type, origin of request
- reason and duration of absence (for exam upon return to work)
- reason and date of cessation of work (for exam at the end of employment)

- circumstances necessitating the transfer:
  - exam at start of work
  - exam on returning to work
  - special exam for a change in work place
  - special exam at request of Personnel Director
  - exam at termination of employment
- supporting documents
  - request for medical exam (doc. no 1)

## 2. Worker identification and biographical data

### -content:

- identification data;
  - surname and forenames
  - national id. number
  - employee number
  - SS number
  - sex

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- date and place of birth
- date of entry
- date of leave, and reason
- date and cause of death
- biographical data
  - address and phone number
  - civil status
  - children
  - level of training
- circumstances requiring information transfer:
  - dismissal from agency
  - leave from agency
  - change in data

### -supporting documents:

- worker id. slip (doc. no. 2)

## 3. Work data

### -content

- worker identification

- name and surnames
- national id. number
- identification of work place
- profession
- work category
- facility/office
- program/area of activity
- work hazards
- physical location and telephone number
- description of tasks
- identified hazards
- working conditions.

The data referred to as work hazards are supplied by the Service of Social Security and Industrial Health, in collaboration with the relevant Office or Facility.

-Circumstances necessitating transfer of information:

- dismissal from agency
- change in work place
- major changes in nature of work place
- change in workers' affiliation

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-supporting documents:

- work place identification slip (doc. no. 3)

#### 4. Data for absence with medical cause

-content

- worker identification
  - surname and forenames
  - national id. number
- cause (common illness, non-work accident, maternity)
- leave data
  - date
  - diagnosis
  - treatment (at home, ambulatory, closed facility)
- dismissal data
  - date

- cause (cure, death, temporary disablement, notice forthcoming, to be inspected)
- situations requiring transfer of information
  - change to temporary leave, because of common illness or maternity
  - change to dismissal from temporary leave as a result of common illness or maternity.
- supporting documents
  - a copy of the official INSALUD form Report of Temporary Work Disability
- restrictions on access: Confidential.

Transfer from the Medical Service to the Personnel Director

1 Certificate of fitness for the work place.

-content

- worker id.
  - name and forenames
  - state id. number
- identification of work place
  - profession
  - work category
  - office or facility
  - program/ area of activity
- fitness for work
- restrictions
- proposal for change of work place
- situations requiring transfer of information:
- when the following types of medical exams have been performed:
  - exam at entry to work
  - ordinary periodic exam, if it has occurred
  - special periodic exam, if it has occurred
  - exam on returning to work
  - special exam for change of work place
  - special exam at request of Personnel Director

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- special exam on advice of Medical Service, if this has taken place.

- Supporting documents:

- certificate of fitness for the work place (doc. no. 19)

- Copies to:

- The Radiological Protection Service, if involved
    - the office or facility involved
    - the subject, if required for administrative reasons

## 2. List of workers not present for medical exam

- content

- identification of worker

- name and forenames

- national id. number

- type of exam

- dates of first and second appointment

- periodicity: every trimester

- supporting documentation

- list of workers not present for exam (doc. no. 8)

## 3. List of work accidents not resulting in medical leave

- content

- worker identification:

- name and forenames

- national id. number

- date of accident

- how it occurred (code)

- time period

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- periodicity: weekly

- supporting document:

- a copy of the official form Notice of Work Accidents not resulting in medical leave from the Ministry of Labor and Social Security (doc. no. 22).

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#### 4. Report of work accident

##### -Content

- Worker identification
  - name and forenames
  - national id. number
- accident data
  - date
  - place(coded)
  - address
  - time of day (1 - 24 [sic])
  - day of week
  - witnesses
  - was this the usual job? (y / n)
  - date of leave
  - time of accident (first or second shift)
  - description
  - how it happened (code)
  - machine or substance involved
- auxiliary data
  - accident / recurrence
  - description of injury (code)
  - part of body injured (code)
  - affiliation of doctor giving first aid
  - seriousness of injury
  - type of care at health facility
- circumstances requiring transfer:
  - A work accident occurring to a CIEMAT staff member and requiring medical leave
  - Recurrence of work accident, with or without medical leave, which requires medical attention
- Supporting documents:
  - copy of the official form Accident Report (doc 30) of the Ministry of Labor and Social Security.



-Restrictions on circulation : confidential.

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## 5. Notice of medical leave

-content

- worker identification
    - name and forename
    - state id. number
  - reason for leave
    - work accident
    - occupational illness
  - circumstances of leave
    - date of work accident or illness
    - date of leave
    - estimated length of leave
  - auxiliary data
    - treatment (home, ambulatory, closed facility)
    - care (facility at work, health center, specialist)
    - diagnosis
    - prognosis
  - identification and signature of doctor
- situations requiring transfer
- work accident, professional illness or recurrences of either, which happen to CIEMAT staff members and require medical leave.

-supporting documents

- official form Notice of medical leave (doc 31)

-copy : to the subject

-restrictions on circulation: confidential

## 6. Notice of medical dismissal

-content

- worker identification
  - name and forename
  - state id. number
- reason for dismissal
  - work accident

- occupational illness
  - circumstances
    - date of work accident or illness
    - date of leave
    - cause of dismissal (cure, death, provisional disability, report forthcoming, requiring inspection)
  - auxiliary data
    - removal to another facility
    - cure and aftereffects (wounds, deformities, mutilation, permanent disability)
  - identification and signature of doctor
  - situations requiring transfer
  - work accident, professional illness or recurrences of either, which happen to CIEMAT staff members and result in medical discharge.
  - supporting documents
    - official form Notice of Dismissal (doc 32)
  - copy : to the subject
  - restrictions on circulation: confidential
7. Special notice of a work accident.

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- content
  - worker identification
    - name and forename
    - state id. number
  - place and time of work accident
  - consequences
- situations requiring transfer
  - work accident resulting in death
  - work accident considered serious or very serious by the doctor
  - work accident involving more than 4 workers, whether or not all of them are staff members
- supporting documents
  - internal communication

-copy : to the Service of Industrial Health and Safety

-restrictions on circulation: confidential

8. Report of dismissals or deaths resulting from accident

-content

- worker identification

-name and forename

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-state id. number

-date of work accident

-date of leave

-date of dismissal

-periodicity: weekly

-supporting documents

- a copy of the official form Notice of medical dismissal or death resulting from accidents (doc 33) of the Ministry of Labor and Social Security.

-copy : to the Service of Industrial Health and Hygiene

-restrictions on circulation: confidential

9. Data of medical care provided for work accidents and occupational illnesses.

-content

- time period covered

- identification data for self-insured entity

-number

-address

- care data

-no. of consultations

-no. of visits

-no. of analyses

-no, of x-rays

-no. of audiometry tests

-no. of respirometry tests

-no. of rehabilitation sessions

- period : monthly

- supporting document

-a copy of the official form for Care Activity provided  
by INSALUD (doc. no. 28)

10. Data on the preventive care provided for work accidents  
or occupational illnesses.

-content

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- period covered
- data of self-insurer
  - number
  - address
- data of care provided:
  - no. of exams performed and diseases detected
  - vaccinations (type and number)
  - health education (programs, no. of workers)
  - health hygiene inspections (type and number)
- period: monthly
- supporting document:
  - a copy of the official form for Preventive Activity  
carried from INSALUD (doc no 29)

11. Report of the worker clinic

-content

- worker id.
  - name and forenames
  - state id. number
  - birth date
  - address
  - profession
- identification of attending physician
  - name and forenames
  - medical board number
  - address
- data on worker temporary leave
- information on the accident (injuries, aftereffects)
- medical diagnosis and clinical report
- treatment provided (possible therapy)

- present medical situation:
- 55 -possible rehabilitation
- date of medical discharge
- circumstances requiring transfer:
- any work accident or occupational illness occurring to any CIEMAT worker, which results in:
  - permanent non disabling injuries which must be compensated for according to seriousness;
  - permanent disability subject to evaluation by the INSS (Social Security)
- supporting documents:
  - a copy of the official form Work Clinic Report from INSALUD (doc. no. 36)

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- restrictions on circulation: confidential

## 12. Declaration of Occupational Illness.

### -content

- worker id.
  - name and forenames
  - SS number
  - sex and birth date
  - address
- work place data
  - identification
  - Social Security no.
  - activity
  - managing body / collaborator
- employment data
  - present place of work and starting date
  - previous places of work
- data on occupational illness
  - diagnosis
  - date of work leave (if occurred)
  - precursors of occupational illness
- position and signature of filer

- circumstances requiring transfer:
    - any occupational illness diagnosed in a CIEMAT staff member whether or not resulting in leave.
  - supporting document
    - a copy of the official form for Declaration of Occupational Illness of INSALUD (doc no 38)
  - copy to: Service of Industrial Health and Safety
  - restrictions on circulation: confidential
- 13 Notice of occupational illness with medical leave
- contents
    - worker id
      - name and forenames
      - state id number
    - data on illness
      - diagnosis according to Manual of Occupational Illnesses (certain or tentative)
      - clinical file
      - seriousness
      - work involved
      - time of exposure to hazard
      - date of entry exam
      - date of last periodic exam
  - circumstances requiring transfer
    - any occupational illness in a CIEMAT staff member which results in medical leave
  - supporting document;
    - a copy of the official form Report of Occupational Illness from the Ministry of Health and Social Security (doc no. 39)
  - copy to: Service of Industrial Health and Hygiene
  - restrictions on circulation: confidential
14. Communication of Occupational Illness through permanent disablement or death
- contents

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- worker id
    - name and forenames
    - state id number
  - data on illness
    - diagnosis according to Manual of Occupational Illnesses (certain or tentative)
    - date of leave, discharge or death
    - work involved
    - time of exposure to hazard
    - date of entry exam
    - date of periodic exams
    - date of transfer to work place not involving hazard
    - classification of work and times spent, last 5 years
  - circumstances requiring transfer
  - any occupational illness in a CIEMAT staff member which results in death or permanent disability eligible for INSS review
  - supporting document;
  - a copy of the official form Report of Occupational Illness for Permanent Disability or Death from the Ministry of Health and Social Security (doc no. 40)
  - copy to: Service of Industrial Health and Hygiene
  - restrictions on circulation: confidential
15. Morbidity and Mortality data for work accidents and occupational illnesses
- content
  - time period
  - identification data of self-insurer
    - number
    - address
  - quantitative data on work accidents and occupational illnesses
    - size of work force
    - number of work leaves

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- number of leaves at month's end
- number of discharges processed
- total number of leave days of dischargers
- number of deaths
- percentage on leave
- monthly leave index
- mean length of leave
- qualitative occupational illness data
  - diagnoses
  - worker id. number
  - dates of leave and discharge
- periodicity: monthly
- supporting document:
  - a copy of the official form Morbidity and Mortality Data for Work Accidents and Occupational Illnesses from INSALUD (doc. no 35)
- copy to: Service of Industrial Health and Safety
- restrictions on circulation: confidential

#### 16. Request for transport service

##### -content

- worker id.
  - name and forenames
  - national id. number
- reason for service
  - date, time and place of departure
  - approximate journey time and destination

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##### -circumstances requiring transfer:

- special need (in time or place) for the use of ambulances belonging to CIEMAT

##### -supporting document:

- a form Request for Transport Service

#### 5.2.2 RADIOLOGICAL PROTECTION SERVICE

##### 1. Request for medical classification

##### -content



- worker id
  - name and forenames
  - state id. number
- destination
  - staff (CIEMAT, outside)
  - classification (fit, unfit, under observation)
  - date and signature
- circumstances requiring transfer
- medical exams for workers occupationally exposed to radiation when:
  - they begin work
  - they return to work
  - special exam for change of work place
- supporting documents
  - Request for Medical Classification (format PR-X7-0208)
- 2. Classification slip
- content
  - worker identification
    - name and forenames
    - state id. number
  - professional data
    - category radiation exposure
    - radiological heading
    - description of tasks
- Installation data
  - category
  - radiological hazards (contamination, external irradiation)
  - sources of radiation (x-rays, sealed sources, non-sealed sources)
- Other occupational exposure to radiation
- circumstances requiring the transfer
- medical exams for workers occupationally exposed to radiation in cases of

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- starting work
- ordinary periodic, special periodic and return to work, if the working conditions have changed
- special for a change in work place
- supporting document
  - a copy of the Classification slip (format PR-X7-02-01)

### 3. Notice of unusual radiological situation

- content
  - worker id
    - name and forenames
    - state id. number
  - circumstances
    - exceeding dose limits
    - accidents
  - description
  - dose or estimated dose
- circumstances requiring transfer:
  - special exam because of:
    - exceeding dose limits
    - radiological accident
- supporting document
  - internal memo
- restrictions on circulation: confidential

### 4. Dosimetric report:

- content
  - worker id
    - name and forenames
    - state id. number
  - dosimetry
    - periodic inclusive
    - heavy dose
    - light dose
    - origin (external irradiation or internal contamination)

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- supporting document
- dosimetry report
- circulation restrictions: confidential
- 5. Notice of removal of classification as worker occupationally exposed to radiation
- content
- worker id
  - name and forenames
  - state id. number
- declassification data
  - temporary (reason and date)
  - transfer (date, new position)
  - permanent (date and reason)
- circumstances requiring transfer
- declassification as a worker occupationally exposed to radiation
- supporting document
- internal memo

#### Transfer from Medical Service to Radiological Protection Service

1. Notice of Medical Classification
  - content - already described
  - circumstances requiring transfer
  - previous request from the Radiological Protection Service
- supporting document
- Request for Medical Classification (format PR-X7-02-86)
- 2 Certificate of fitness for the work place
- content- already described
- circumstances requiring transfer
- any medical examination with a result classifying the worker as UNFIT or UNDER OBSERVATION
- supporting document

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- a copy of the Certificate of fitness for the work place (doc. no 19B)

### 5.2.3. Service of Industrial Health and Safety

Transfer from the Service of Industrial Health and Safety to the Medical Service

#### 1. Work data

-content

- worker id.
  - name and forenames
  - state id. number
- identification of work place
  - profession
  - category of work
  - office/ agency
  - program/ area of activity
- work hazards
  - location and phone number
  - description of tasks
  - identified risks
  - working conditions

The data referred to as worker identification and identification of work place will have been supplied by the Personnel Director through the Medical Service.

-circumstances requiring transfer

- release to agency
- change of work place
- major change in the nature of work place
- change in the official affiliation of the worker
- supporting document
- work place identification slip (doc. no. 3)

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#### 2 Report on the work place

-content

- data on hazards and working conditions which may have changed relative to those described in the preexisting work place identification slip.

- evaluation of health and safety conditions at the work place

- circumstances which require the transfer

- detection, by the Medical Service or by the Industrial health and Safety Service itself of any irregularity in the work place which might impact the workers' health

- supporting document:

- internal memo

- circulation restrictions: confidential

### 3. Notice of investigation of work accident

- content

- evaluation of the circumstances leading to the accident (technical factors, human factors, protective measures, etc)

- description of corrective measures, if any

- circumstances requiring the transfer

- any work accident occurring in CIEMAT, which affects either staff workers or outside workers

- supporting document

- internal memo

- circulation restrictions: confidential

### 4 notice of investigation of occupational illness

- content

- evaluation of the circumstances of the work place which resulted in the development of an occupational illness (technical factors, human factors, protective measures, health monitoring, etc)

- description of corrective measures, if any

- circumstances requiring the transfer

- any diagnosis (either tentative or definite) of an occupational illness, which results in the Medical Service issuing a copy of the official form Notice of Occupational

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Illness or Notice of Occupational Illnesses resulting in  
Permanent Disability or Death.

-supporting document

- internal memo

-circulation restrictions: confidential

Transfer from the Medical Service to the Service of  
Industrial Health and Safety

1. Notice of work accident

-Content

- Worker identification

-name and forenames

-national id. number

- work place identification

-name

-address

-activity in CIEMAT

- accident data

-date

-place(coded)

-address

-time of day (1 - 24 [sic])

-day of week

-witnesses

-was this the usual job? (y / n)

-date of leave

-time of accident (first or second shift)

-description

-how it happened (code)

-machine or substance involved

- auxiliary data

-accident / recurrence

-description of injury (code)

-part of body injured (code)

-affiliation of doctor giving first aid

-seriousness of injury

- type of care at health facility
- /91
- circumstances requiring transfer:
    - A work accident occurring to a CIEMAT outside employee.
  - 2. Work accident slip
  - Content
    - Worker identification
      - name and forenames
      - national id. number
    - accident data
      - date
      - place(coded)
      - address
      - time of day (1 - 24 [sic])
      - day of week
      - witnesses
      - was this the usual job? (y / n)
      - date of leave
      - time of accident (first or second shift)
      - description
      - how it happened (code)
      - machine or substance involved
    - auxiliary data
      - accident / recurrence
      - description of injury (code)
      - part of body injured (code)
      - affiliation of doctor giving first aid
      - seriousness of injury
      - type of care at health facility
  - circumstances requiring transfer:
    - any work accident, resulting in medical leave or not, occurring to a CIEMAT employee
    - supporting document
    - Work accident slip (doc. no 23)
  - circulation restrictions: confidential
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3. Communication of the report on discharges and accidental deaths  
-content: already described  
-periodicity: weekly  
-supporting document  
- a copy of the Official Form of the Report on discharges and deaths from accidental causes (doc. no. 33)  
-circulation restriction: confidential

4 Special communication of Work Accident  
-content: already described  
-circumstances requiring transfer: already described  
-supporting document:  
- a copy of the internal memo from the Personnel Director  
-restrictions on circulation: confidential

5. Declaration of occupational illness  
-content: already described  
-circumstances requiring transfer: already described  
-supporting document  
- a copy of the official form for Declaration of Occupational Illness (doc. no. 38)  
-circulation restrictions: confidential

6. Communication of Occupational Illness resulting in medical leave  
-content: already described  
-circumstances which require transfer: already described  
-supporting document:  
- a copy of the official form Notice of Occupational Illness (doc. no. 39)

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-restrictions on circulation: confidential  
7 Communication of Occupational Illness through Permanent Disability or Death  
-content: already described  
-circumstances requiring transfer: already described  
-supporting document:



- a copy of the official form Notice of Occupational Illness resulting in Permanent Disability or Death (doc. no 40)
- restrictions on circulation: confidential
- 8. Data on morbidity and mortality from work accidents and occupational illnesses
- content: already described
- circumstances requiring transfer: already described
- supporting document
- a copy of the official form Morbidity and mortality data for work accidents and occupational illnesses (doc. no. 35)
- circulation restrictions- confidential

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#### 5.2.4. Workers

##### Transfer of workers [sic] to the Medical Service

1. Request for medical exam
  - content: already described
  - circumstances requiring transfer
  - special medical exam requested by worker
  - supporting document
  - request for medical exam (doc. no 1)
2. Medical questionnaire
  - content
    - worker id
      - name and forenames
      - state id number
    - work history
      - previous jobs - times, hazards
      - work accidents
      - work illnesses
    - guided interview
      - family history
      - personal history
      - habits

- allergies
- immunizations
- organs and systems
- date and signature of subject
- circumstances requiring transfer
- exam at start of work
- supporting document
- medical questionnaire (doc. no. 7)
- circulation restrictions : confidential

### 3. Clinical reports

#### -content

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- medical information dealing with worker
- circumstances requiring transfer
- medical studies on the worker by specialists or health services outside the Medical Service, for inclusion in the corresponding medical file.
- supporting document
- internal memos
- circulation restriction: confidential

### Transfer from the Medical Service to Workers

#### 1. Medical exam appointment

##### -content

- worker id
  - name and forenames
  - state id. number
  - office / facility
  - program / area of activity
  - postal address
- appointment data
  - place
  - date
  - time
  - type of exam
- date of issue

- circumstances requiring transfer
- any medical exam carried out by the Service
- supporting document
- Medical Exam Appointment (doc. no. 5)
- 2 Information sheet for medical appointment
- content
- reason for appointment
- preparations taken by subject
- suggestions to facilitate the clinical interview
- circumstances requiring the transfer
- any medical exam appointment
- supporting document:
- medical exam information sheet (doc. no. 6)
- 3. Medical report
- content
- summary of clinical history
  - biographical data
  - work history
  - family and personal histories
  - interview
  - clinical examination
  - complementary examinations
  - specialized studies
- clinical judgement
- fitness for the work place
- medical recommendations
- circumstances requiring transfer
- any medical exam performed by the Service
- circulation restrictions: confidential
- 4. Certificate of fitness for the work place
- content: already described
- circumstances requiring the transfer

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- when for medical reasons a change of work place is suggested. This will be done at the request of the interested party.
- supporting document
- a copy of the Certificate of fitness for the work place (doc. no 19)

#### 5. Request for specialist attention

##### -content

- identification of specialist
  - name and forenames
  - address
  - phone number
- identification of worker
  - name and forenames
  - state id. number
- reason for consultation
- date and signature
- circumstances requiring transfer:
  - a request by the Service for specialized medical attention at the expense of CIEMAT
- supporting document
- Specialist Referral Form (doc. no 17)
- circulation restrictions: confidential

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#### 6. Request for health care

##### -content

- identification of facility
  - name
- worker identification
  - name and forenames
  - state id. number
- reason for consultation
- date and signature
- circumstances requiring a transfer

- referral of the worker to other facilities or health institutions when considered necessary from a medical point of view.

- supporting document

- Request for Health Care form (doc. no. 37)

- circulation restrictions: confidential

## 7 Communication of results

- content

- worker identification

- name and forenames

- state id. number

- result of the examinations performed

- signature, and stamp of the Service

- circumstances requiring transfer

- communication to the worker of the results of tests or examinations performed separately from those in the medical exam.

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- supporting document

- Communication of Results form (doc. no 41)

- circulation restrictions : confidential

## 8 Report on brief absence for medical reasons

- content

- worker identification

- name and forenames

- state id. number

- identification of work place

- work category

- facility / office

- program /area of activity

- period of expected absence

- signature and seal of Service

- circumstances requiring transfer

- the necessity, in the doctor's opinion, that a worker be absent from work for the working day

- supporting document
- copy of the Notice of brief absence for medical reasons (doc. no. 42).

#### 5.2.5. General Technical Secretary

Transfer from the General Technical Secretary to the Medical Service

##### 1. Request for medical exam

- content: already described
- circumstances requiring transfer
- medical exam of workers not on CIEMAT staff
- supporting document
- a request for Medical Exam (doc no. 1)

##### 2. Identification and biographical data on worker

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- content: already described
- circumstances requiring transfer
- medical exam for workers not on CIEMAT staff, when this is the first exam performed by the Service or some of the data has changed
- supporting document
- worker identification slip (doc. no 2)

##### 3. Work data

- content: already described
- circumstances requiring transfer
- medical exam for workers not on CIEMAT staff, when this is the first exam or the work place has changed
- supporting document
- work place identification slip (doc. no 3)

##### 4. Radiological Hazards slip

- content
  - worker identification
    - name and forenames
    - state id. number
  - professional data
  - radiation exposure category

- radiological classification
  - description of tasks
  - facility data
    - radiological risks (contamination, external irradiation)
    - sources of radiation (x-ray, sealed or unsealed emitters)
  - other occupational exposure to radiation
  - medical exposure (therapeutic or diagnostic)
- Some of these data are supplied by the Supervisor of the relevant facility.
- circumstances requiring transfer
    - examinations for workers occupationally exposed to radiation not on the CIEMAT staff when this is the first exam performed by the Service or the radiological conditions of the work place have changed.
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- supporting document
    - Radiological hazard slip (doc. no. 4)
- Transfer from the Medical Service to the General Technical Secretary
1. Certificate of fitness for work
    - content: already described
- circumstances requiring transfer
    - any medical exam performed on workers not on the CIEMAT staff.
- supporting document:
    - Certificate of fitness for work place (doc 19)
2. Entry in Radiological Logbook
- content
    - exam data
      - date
      - class
  - data on fitness
    - fitness

- restrictions on exposure to external radiation hazards, external contamination or internal contamination.
- restrictions on the use of protective equipment
- diagnostic exposures
  - date
  - type of exposure
  - intensity (mA)
  - voltage (kV)
  - distance (cm)
  - time(ms)
  - area of exposure (cm sq.)
  - estimated dose (mSv)
- Medical Service
  - signature of doctor
  - board number
  - seal of Service
- Circumstances requiring transfer:
  - medical examinations for worker exposed occupationally to radiation not on the CIEMAT staff, when necessary
  - supporting document
  - Radiological logbook

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#### 5.2.6. OFFICES AND FACILITIES

Transfer From the Medical Service to Offices and Facilities

##### 1. Certification of fitness for the work place

- content: already described
- circumstances requiring transfer
  - any medical exam which results in restricting the fitness of the worker, or when the worker is considered "unfit" or "under observation" for medical reasons.
- supporting documents
  - copy of certificate of fitness for the work place (doc. no. 19)



2. Communication of brief absence for medical reason  
-content: already described  
-circumstances requiring transfer: already described  
-supporting document  
- Notice of brief absence for medical reasons (doc. no. 42)

#### 5.2.7. Other organizations

In certain circumstances the necessity arises of transferring information to or from other organizations not yet described:

- The Health Evaluation Service- All the medical information necessary for carrying out the proper functions of this Service.
- Other competent organizations (Ministry of Industry, Trade and Tourism, Ministry of Labor and Social Security, Ministry of Health and Consumer Affairs, Council on Nuclear Safety, Ministry of Justice, etc). All the necessary information according to their jurisdictions.

The transfer of information in one or other direction is directed through the General Technical Secretary, to which the Medical Service is an organizational subordinate.

Given the great variety involved in these transfers, it is not practical to standardize or define each of the possible situations, so that these transfers are performed as quickly and effectively as is possible at the time called for.

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#### 5.3 OTHER DOCUMENTS OF THE MEDICAL SERVICE

The Service uses other documents which record certain aspects of its activity:

- The Descriptive Memo of Medical Follow up of Personnel Occupationally Exposed to Radiation. May 1987
- The Descriptive Memo for Radioactive Facilities IR-23: Diagnostic X-ray.

- Safety Inspection of Radioactive Facility IR-23. April 1991.
- Regulations for Operating Radioactive Facility IR-23. April 1991
- Certification of Radioactive Facility IR-23, April 1991
- Emergency Plan for Radioactive Facility IR-23. May 1991

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## 6. PLAN FOR ASSURING AND CONTROLLING QUALITY

### 6.1 INTRODUCTION

The quality of a product or service is understood to mean the degree of approximation of each of its characteristics to those of the prototype. But the term 'quality' in Health Services has not yet acquired a single definition. The definition given reflects the particular viewpoint of one of the three basic parties involved: user, doctor, and management.

For the user, it is expressed in terms of responsibility, competence, and respect. For the doctor and assisting personnel it means performing the task using knowledge and resources which are the most current available to medical science. And for the manager, it is a question of having available the best personnel and facilities in order to offer the best service in the most efficient way.

The notion of quality in an industrial product depends on raw material of uniform quality, standardized production and a uniform final product. But for a Medical Service the situation is different, given the great variety in the raw material, in this case the user, and in the difficulty of defining the end product, that is, health.

At the same time, quality, as a universal concept, is a property whose definition will vary with the times and will little by little adapt to the demands of any time or place. For this reason, the concept of quality is in this case a question of finding, at any given moment, the balance between the means used in providing health services and the

ability to supply the needs of the patients-clients-users, always understanding the end product to be achieving the basic goal of the Medical Service: monitoring, protection, and improvement of the health of CIEMAT workers.

## 6.2. Assuring quality

Quality is not a single attribute, but rather one which is conferred by a set of functionally interrelated attributes.

These factors or attributes can be summarized as:

- human means : health personnel
- material means : material and products used, equipment, facilities, buildings, etc
- methodology: working methods, procedures, etc
- management : direction and organization.

The optimization of each of the factors involved will result in approaching a guaranteed overall quality of health care provided.

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### 6.2.1 Human Means

The human resources available to the Medical Service have been described in section 2.2 of this Manual.

Its quality is guaranteed by requiring an adequate level of academic training and above all in the standard of performance in the field of Industrial Medicine. The increase in quality of human resources results in the availability of stipends to assure attendance to continuing training courses, introductions to new technologies, seminars, conferences, etc.

There is also another very interesting facet to quality of human resources: the responsibility of the health personnel to provide a human aspect to its service. This is an important factor in any service group, this is especially true when the service provided is involved in the user's health.

The quality of this aspect of human resources is guaranteed by the flexibility of scheduling, suitability of treatment, dedication of the workers, all of which characterize the workforce of the Service.

#### 6.2.2 Material Methods

The technical resources available to the Medical Service are described in section 2.3 of this manual.

#### Installations

The Service was completely remodelled in 1990. At present it has available some 600 sq. m. of useful area, completely modernized.

The remodelling was undertaken by the in house Works Service of CIEMAT, together with the Medical Service, which provided the fundamental criteria for use and operation necessary to guarantee the quality, not only of the physical installations, but also their functionality. A demonstration of the quality of the installations is provided by the Report of Construction Properties of the areas meant for Radiodiagnosis (Radioactive Facility IR-23), which is included as Supplement no. III.

#### Technical Equipment

The service has available medical diagnosis equipment, therapy equipment and lab equipment which has been recently added.

Its technical characteristics are given in section 2.3.2 of this Manual.

Below we give the dates of acquisition of the larger pieces of equipment: /106

- Siemens Sicard P electrocardiograph June 87
- Coulter-Counter S plus Jr differential blood analyzer, Dec 88
- IL Genesis 21 automatic biochemical analyzer Dec. 88
- Essilor Visiotest visual function tester July 90.
- Hortmann DA 323 Audiometer July 90

- Kodax X-omat Mod. M-6 B processor, with Kodak automatic mixer Automix II - Nov 90
- Siemens radiodiagnostic equipment, Dec. 90
- Philips Orion ultrasound Dec 90
- Urotrom RL 9 automatic urine analyzer Dec 90
- Digiscan Atom 434 photodensitometer - Dec 90
- Rehabilitation equipment - Dec. 90

All of these are equipment supplied by well-known and established companies, which guarantee the quality of their product with testing certification and, in the case of equipment not locally manufactured, with the relevant certification from the Minister of Industry, Trade and Tourism.

Procurement was arranged by the CIEMAT Buying Group, which chose among at least 3 businesses offering either the same product or equivalent products.

For an even firmer guarantee, technically complex equipment is subjected to an obligatory annual inspection, at the least, by the Technical Service of the supplier, as is the case with the Siemens radiodiagnostic equipment, and as part of the supply arrangement the supplier may provide contracts for long-term maintenance, as is the case with the Coulter-Counter S-plus Jr blood analyzer and the IL Genesis 21 automatic blood analyzer.

#### 6.2.3. Methodology

All the work methodology of the Medical Service has been described at length elsewhere in this Manual. The basic objective of the Manual is to guarantee in a clear and standardized form all of the technical and administrative procedures involved in the activities of the Service, and following it strictly is, precisely, the best guarantee of the quality of these activities.

Modern working methods have been inculcated in the Service, and designed to systematize as far as possible all

medicine, both preventative and curative, in order to promote maximum effectiveness.

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#### **PREVENTIVE MEDICINE**

Given that medical diagnosis is a fundamental pillar on which preventative medicine rests, its systematization constitutes the working method most appropriate to fulfill the goals of the Service.

The present framework of profiles and subprofiles applied to the dichotomy worker-work place provides an attractive means of guaranteeing the desired degree of approximation to a prototype of quality preventative medicine.

This quality basically resides in:

- Knowledge of the place of work and its inherent risks. This knowledge is supplied by the Work place identification slip (document no. 3) and, when relevant, the Classification Slip (format PR-X7-02-01) or the Radiological hazards slip (doc. no. 4), supplied by the Service for Industrial Health and Safety and the Radiological Protection Service prior to any medical exam.
- A knowledge of the state of health of the worker. This is really the source of the assessment of the results the hazards inherent in a work place may have on workers' health.
- Preventative measures. With this data, the Medical Service has available the elements for defining its activity in the field of preventing health hazards.

A fundamental aspect of prevention is the communication to the worker of any alteration or finding which may have appeared as a result of her medical exam. This communication is performed by means of the Medical Report (doc. no. 8) which also contains a recommendations section, which is basic to the initiation of preventative measures at the individual level.

## CURATIVE MEDICINE

This includes a program of curative medicine which is focussed on work accidents, occupational illnesses and diseases not related to work, and which guarantees the best care possible for the worker.

In the case of an illness resulting from a work accident or an occupational illness, the fact that CIEMAT operates as a self insured entity provides a good guarantee of the quality of the care provided and improved control of management by the organization.

As regards diseases not related to work, the provision of care for a common illness (using means as much as possible within the scope of the Medical Service) gives the worker a further guarantee of the quality of health care provided by the Service.

This quality also is called upon in responding to the user's requests for medical attention, evaluation, help in dealing with outside health groups, etc., in regard to diseases which are not specifically work-related, including requests for assistance in problems of a psycho-social nature.

## ESTABLISHING PROCEDURES

Every working method of the Service is based on a system of documentation and records which is endowed with considerable power. This system is a basic guarantee of the quality of the working methods: all procedures are given a protocol from the point of view of their administrative requirements and, at the same time, all activities, whether medical per se or administrative, are recorded.

This protocol guarantees the uniformity and reproducibility of the assistance provided, which are fundamental aspects of the Service' ability to guarantee its service.

Additionally, a system of recording and transferring documentation, such as has been made a part of the Service, is the fundamental basis on which all Industrial Medicine rests as far as its aspects of collective prevention and the evaluation of the working population's health are concerned.

#### 6.2.4 Management

The direction and organization of a Medical Service must be adapted to the modern criteria of business management. Always understanding that its basic goal is the health of the worker, such a management system will also benefit the business. A modern Medical Service should be a management tool which, in addition to fulfilling its basic role (satisfaction of the industrial health needs of /109 workers) itself contributes to the fulfillment of the business' goals.

For this reason, management must be closely integrated and well connected to the rest of the Services involved in the multidisciplinary tasks of Health, Hygiene, Safety, and Protection of the worker.

At the present time the Medical Service is a part of the Industrial Health Division and is very closely connected to the Service of Industrial Health and Hygiene and the Health Evaluation Service.

Additionally, the quality of management also depends on its flexibility and rapidity in promoting efficiency. For this reason, the Medical Service has introduced information technology into the management of the Laboratory of Clinical Analysis. This administrative and technical management is supported by equipment consisting of:

- An Olivetti M380/XP7 micro computer, approved by the State Property Director
- An applications program, from CSS, which handles technical analyses from the moment the request is submitted, having an "on line" connection to the biochemical and blood autoanalyzers, and publishes reports and results, and stores



these in a data base which allows easy management and use in epidemiological work.

Of course, from the purely management standpoint, the Service is integrated into the informatics infrastructure of CIEMAT.

To further the integration of management, there is the planned installation of a Health Information System (Sistema de Informacion Sanitaria = SIS) under consideration by the Medical Service management, which would be globally integrated into the Union of Industrial Health and have complete communication with the Health Evaluation and Industrial Health and Safety services which are a part of this Union. This SIS also provides for a connection to the system of the Personnel Management and the dosimetric data base of the Radiological Protection Service, to guarantee the maximum utility.

### 6.3. Quality control

The basic philosophy of quality control has the goal of assuring that all the goods and services produced by an enterprise are, as far as possible, in conformity with the model and are uniform. This philosophy is also applicable to a Medical Service.

As a point of departure, a Program of quality control for a Medical service should act on three essential components involved in the production of health services:

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- Structure: installations and personnel
- Process: working methods
- Results: individual health and psycho-social well being

#### 6.3.1. Structural quality control

The basis of the structural approach to quality control is that, given good conditions, it is most probable that good health care will be provided. If the methods are quality ones, the final product will also be quality.

Thus, this design consists of a method of 'a priori' choosing quality control. This is the simplest and oldest method, based on establishing weightings or value scales and comparing actuality to these.

These criteria or standards have three objectives:

- To guarantee the structural quality of the installations: the building infrastructure, safety systems for disaster prevention, etc. In the CIEMAT Medical Service, quality control of installations is exercised in an established way, by the relevant Services or Units of the Center (Engineering, Safety, Radiological Protection), both as regards the quality of the installation and its maintenance as well as its safety of operation.
- To guarantee the minimal medical standards: the standards relative to this goal include the quantity of equipment, the number, training and other qualities of the personnel. Funding of the Service, both for equipment as well as health personnel, is subject to achieving quality standards set by bodies outside CIEMAT.

The Service was authorized as a specialized monitoring body for personnel occupationally exposed to radiation, with prior approval of the CSN (Council on Nuclear Safety), by the Minister of Health and Consumer Affairs, on 10 February 1988. The CSN performs periodic inspections to guarantee the quality control of the equipment described in the corresponding memo necessary for its funding to be authorized.

- As a self-insured member of the ILT for matters of industrial accident or occupational illness, the Service is also subjected to the relevant inspections and tests by the Ministry of Labor and Social Security.
- Since the Service is responsible for the Radioactive Installation IR-23 (medical diagnostic x-ray), it is subject to periodic tests by the in house CIEMAT Radiological

Protection Service, and to external inspections by the regulatory agency, the CSN.

Similarly, the qualifications of health personal with radiological duties are periodically tested by the CSN, both with respect to the renewal of their licenses (Licencias de Supervisor), and to ensure that they are enrolled in continuing training programs given by the Energy Research Institute (Instituto de Estudios de la Energia). /111

#### 6.3.2. Procedure quality control

Just as the control of structural quality is a static process which, so to say, 'photographs' a given instant in the structure of the Medical Service, so the quality control of work procedures is a dynamic process, based on the principle that if the working methods are of high quality, so will be the care given.

This method basically rests on the analysis of the Clinical History, but also on the direct examination of working methods and on the existence of procedural protocols.

The best known method of procedure quality control is the Medical Audit, which can be defined as a retrospective evaluation of the quality of care based on clinical histories. This method consists of choosing a specific procedure (in this case, a selected profile of examination, for example), selecting a sample group of the relevant clinical histories and analyzing the working method followed in reaching a diagnosis.

To do this it is necessary to establish a prototype, which is in this case the set of medical and health procedure protocols.

Nevertheless, this method does have some drawbacks. First is the difficulty of objectively assessing the medical procedure. Another stems from the difficulties which may be assumed to exist in having to adapt the established

protocols to practical cases, so that they do not hinder the practice of medicine. For this reason, procedure protocol must not be allowed to become a straitjacket which confines the practice of medicine as an art.

Thus, the protocolization of the Clinical History is understood as the end result of a series of minimal requirements as regard content, codification, etc, which guarantee the homogeneity of the result and serve as a guide, but do not impede the spontaneous reasoning of the doctor in a given situation. Otherwise, it would be the doctor's reasoning itself which would require audit.

An identical philosophy is applicable to the protocolization of the rest of the services the Service provides. Each activity is necessarily entered in a form and recorded as described in this Manual. This Manual, in its revision 0, was subjected to quality control from outside the Medical Service, by the CIEMAT representative from the Union of Quality Guarantee. A period of six months was allowed to complete the first revision of the working methods outlined in the protocols. When this is finished, it will be followed by the process of definitively setting the protocols for Service activity

as General or Specific Procedures which must obligatorily be followed, according to the standards of quality control for all of CIEMAT. /112

At the moment, there is a specific aspect of the Medical Service to which is applicable, with the full force of the attendant problems already mentioned, the work procedure quality control method. This case is the Laboratory of Clinical Analyses.

In this area, quality control is fully established on both the national and international level, through an external System of Quality Control carried out by several bodies.

The Medical Service has, since January 1989, been a member, on behalf of its Laboratory of Clinical Analyses, of the Multidisciplinary Program of Quality Control of the AEFA (Asociacion Espanola de Farmaceuticos Analistas = Spanish Association of Analytic Pharmacists) and of the AEBC (Asociacion Espanola de Biopatologia Clinica = Spanish Association of Clinical Biopathology), a program which is officially recognized by the Ministry of Health and Consumer Affairs.

This program allows the participants to practice their own control, as well as to be compared with other laboratories, using a method preserving anonymity.

The Laboratory of Clinical Analysis participates in programs of:

- Hematology, with 7 analytic parameters
- Biochemistry, with 20 analytic parameters

In either case, there are 12 annual inspections, given monthly.

Also monthly the Laboratory receives a statistical report of its results, which includes:

- A histogram of the frequency of analytical results in each parameter, with an indication of the percentage of deviation and the standard deviation with respect to the rest of the participants, in both graphic and numerical forms (for all results, for results from similar methods, and for results with the same method).
- A bioanalytical comparison diagram of the results themselves, with the interpretation of its own reference values (for all results, for similar methods and for the same method).

Similarly, each year two statistical summaries are received:

- One is global, for each parameter and method, analyzing the median accuracy, the median precision, the median

coefficient of analysis, the median level of concentration for the parameter analyzed and the number of participants.

- The other is specific, for each participant and for each parameter, recording their accuracy, precision, analysis coefficient and a comparison with the rest of the participants.

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### 6.3.3. Quality control of results

The two methods of quality control described up to now are indirect methods, which do not directly measure the level of the user's health, but rather other things related to it: the structure of the service, and the care process. But now, some studies have shown that it is not always true that a good structure and good methods produce the desired results in terms of health.

For this reason, this method should be, at least to all appearances, the most objective means of measuring the quality of medicine. Nevertheless, it has been the least used. There are some reasons which in practice justify this.

- First, it is necessary to have a good scientific basis supporting the clinical method employed.

- Second, it is necessary to make a prognosis for each patient, a prognosis which will constitute the standard against which care activity is assessed.

- Thirdly, the user is a very important factor in the maintenance of their own health, so that their pejorative activity may prejudice the final result, though this is not the fault of the actions of the care group.

- Finally, there are inherent technical problems in when and how to measure the user's level of health.

By the result of health care is meant the 'change in the course of the state of health of the individual and in its future which may be attributed to health care previously

given, including the health orientated activities of the user and changes in their health behavior.'

Schematically, the result of health care will depend on the integration of four factors:

#### RESULT

Change in the State of Health of Sick Person Habits	User Satisfaction	Increase in Health Knowledge	Acquiring Good Health
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The method of quality control of results studies:

- The user's opinion
- The opinion of the community
- The impact on the community

This control is realized by means of:

- Questioning the user
- Questioning the population
- Epidemiology of the population
- Statistical quality indicators

The approach to quality control by examination of results is the most practical means of assessing the quality of care provided by an actual system and received by a definite population: it is not the only approach, but is quite probably the best for making comparisons, and results are a starting point for all studies dealing with efficiency.

At present, it is difficult to establish standards for results:

- There is very little information available relating to average results as opposed to optimal results from therapeutic medicine.

- There is very little information available on results apart from those which are related to physical or physiological variables.
- There is very little documentation of conventional medical knowledge on choosing the results to measure, and on the time at which measurements should be made.
- There is still little information on the epidemiology of results, even in the most common illnesses.
- To these difficulties can be added the property inherent not only to assessment of results in the area of physiology, but also of psychology, which can be so intermingled that, in spite of using weighing factors, uncontrolled variables can result.

In any case, the approach to quality control from the viewpoint of reviewing results should only be used to measure the quality of the system, not the activity of a particular professional working within the system.

The difficulties described lead to a single conclusion: in preventive medicine and in health education, greater attention must be paid to the formulation of precise and measurable objectives. For this reason

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the Medical Service provides:

- A clinical history which is orientated toward concrete problems and specific hazards, as a step forward toward the standardization of goals and as such toward the final assessment of the concrete results.
- A system of records and of information transfer which constitutes a support for the collection of data essential for any epidemiological monitoring program.

In any case, a program of continued epidemiological monitoring constitutes the method of choice for the assessment of final results on the health of the worker, as an indicator of quality of the services provided by the Medical Service.



Using this criterion, there was recently created within the Union of Industrial Health the Health Evaluation Service. This Service has the main goal of performing continuing epidemiological monitoring of the CIEMAT work force, to keep current the knowledge of the state of health of the workers and of the hazards to which they are exposed and to make possible the adoption of adequate preventative measures for illness, and to improve their health.

This system of evaluation based on epidemiological monitoring will provide a continuing quality control of the activity of the Medical Service in its basic area, which is to maintain the collective health of the CIEMAT employees.

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## 7. REFERENCES

- Decree 792/1961 of 13 April. Creation of the Compensatory Fund for insurance of Occupational Accidents and Illnesses.
- Order of 9 May 1962 of the Ministry of Labor, which approves the Regulations in the Decree 792/1961
- Law 193/63 of 28 Dec. Bases of Social Security
- Social Security Law, 21 April 1966
- General Social Security Law, May 30 1974 (B.B.O.O. on 20 and 21 July 1974)
- Law 8/1980 of 10 March. Workers Statute
- Law 13/1982 of 7 April : Social Integration of Disabled
- Regulations of Industrial Medical Services. Order of the Minister of Labor, 21 Nov 1959 (BOE no 284, 27 Nov 1959)
- Order of the Ministry of Labor, Health and Social Security of 28 Oct 1981 (BOE no 264, 4 Nov 1981) on the Organization of Industrial Medical Services
- Medical Standards for the Prevention and Diagnosis of Occupational Illnesses. Orders of the Ministry of Labor, 12 Jan 1963 (BOE 12 March 1963) and of 15 Dec 1965 (BOE 17 Jan 1966)

- General Ordinance on Safety and Hygiene at Work. Order of 9 March 1971 (BOE no 64, of 16 and 17 March 1971, ratified 6 Apr. 1971)
- Manual of Occupational Disease. Decree no 1995/78 of the Minister of Health and Social Security, 12 May 1978
- Occupational Illnesses. Standards of Application, General Undersecretary of Industrial Medicine, Ministry of Health and Consumer Affairs, National Health Institute Publication no 1 389/1982
- New Code for Ethics and Medical Deontology. OMC, 30 Mar. 1990

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- Order of the Ministry of Labor 25 Nov 1976 (BOE 15 Dec 1976): Labor ordinance for personnel providing services in health facilities giving hospitalization, care, consultation or laboratory analysis.
- Royal Decree of 4 Dec. 1985 (BOE no 294, 9 Dec 1985), which establishes the psychophysical aptitudes which drivers must have.
- Royal Decree 1316/1989 of 27 Oct, on Protection of workers faced with the hazards resulting from exposure to noise at work.
- Section 89/391 of the EEC directive on Community Standards for the protection of the health of personnel operating information terminals.
- Regulation on health protection against ionizing radiation. Royal Decree 2519/1982 of 12 August.
- Royal Decree 1753/1987 of 25 Nov, which partially modifies the Regulation on Health Protection from Ionizing Radiation (BOE no 13 15 Jan 1988)
- Safety Guide no 7.4 : "Basis for medical monitoring of workers exposed to ionizing radiation" CSN 1986
- Safety Guide no 7.5 "Actions to follow in case personnel have suffered a radiological accident" CSN 1989

- ICRP No 28: The principles and general procedures for handling emergency and accidental exposures of workers." 1978
- ICRP no 31 "Biological effects of inhaled radionuclides". 1980
- NCRP report 65: "Management of persons accidentally contaminated with Radionuclides" 1980
- UNSCEAR report 1982 "Ionizing radiation: sources and biological effects."
- IAEA safety series no 88 "Medical handling of accidentally exposed individuals" 1988
- Radiological Classification of Personnel. Specific Procedure no PR-X7-02 of CIEMAT, 1 Jul. 1989
- CIEMAT Manual of radiological protection. General Procedure no 30 of CIEMAT, 6 Jan 1990
- ICRP no 60 "1990 recommendations of the International Commission on Radiological Protection" 1991
- Epidemiological study on the possible effects of exposure to low doses of ionizing radiation on the health of workers by the Nuclear Energy Committee. Ed. CIEMAT Feb 1990
- ANDLANER, P. "The practice of industrial medicine" Ed. Cientifico-Medico 1980
- General Undersecretary of Industrial Medicine. INSALUD: Acts of the Special Conference on Industrial Medicine, Madrid 1982
- International Labor Conference: Acts of the Seventieth Meeting. Geneva, 1984
- Masson, S.A.: Industrial Medicine 1968
- Mapfre Foundation: Problems in Industrial Medical Examinations 1986
- Encyclopedia of Industrial Health and Safety. International Office of Labor. Minister of Labor and Social Security. 1989

/118

- National Health Institute. Secretary General: Acts of the II National Congress of Industrial Medicine. 1990
- Industrial Medicine and Industrial Safety. Trimestral review of the National Institute of Industrial Medicine and Industrial Safety. Madrid.
- Castilian Review of Industrial Medicine and Safety. Bimensual publication of the Castilian Society of Industrial Medicine and Safety. Madrid.
- Mapfre Medicina. Trimestral review of the Mapfre Medicine Foundation. Madrid.

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## Appendix 1

### Record Documentation



LIST OF DOCUMENTS

Document no. 0 MEDICAL PROCEDURE  
Document no. 1 REQUEST FOR MEDICAL APPOINTMENT  
Document no. 2 WORKER IDENTIFICATION SLIP  
Document no. 3 WORK PLACE IDENTIFICATION SLIP  
Document no. 4 RADIOLOGICAL HAZARD SLIP  
Document no. 5 MEDICAL APPOINTMENT SLIP  
Document no. 6 MEDICAL EXAMINATION INFORMATION SHEET  
Document no. 7 MEDICAL QUESTIONNAIRE FOR JOB ENTRANCE EXAM  
Document no. 8 LIST OF WORKERS NOT PRESENT FOR MEDICAL EXAM  
Document no. 9 MEDICAL EXAMINATION REQUEST LIST  
Document no. 10 ELECTROCARDIOGRAPH RECORD  
Document no. 11 RADIOGNOSIS RECORD  
Document no. 12 RESPIROMETERY RECORD  
Document no. 13 AUDIOMETRY RECORD  
Document no. 14 VISION TESTING RECORD  
Document no. 15 ULTRASOUND RECORD  
Document no. 16 RECORD OF CLINICAL ANALYSES  
Document no. 17 REFERRAL TO SPECIALIST  
Document no. 18 MEDICAL REPORT  
Document no. 19 CERTIFICATE OF FITNESS FOR WORK PLACE  
Document no. 20 REPORT OF WORK ACCIDENT  
Document no. 21 RECORD OF EVACUATION  
Document no. 22 LIST OF WORK ACCIDENTS NOT RESULTING IN  
MEDICAL LEAVE  
Document no. 23 WORK ACCIDENT SLIP  
Document no. 24 RECORD OF MEDICAL VISITS  
Document no. 25 RECORD OF VISITS TO THE INFIRMARY  
Document no. 26 RECORD OF ELECTROTHERAPY OR REHABILITATION  
Document no. 27 RECORD OF CARE FOR WORK ACCIDENT OR  
OCCUPATIONAL ILLNESS  
Document no. 28 CARE PROVIDED  
Document no. 29 PREVENTIVE ACTIVITIES PERFORMED  
Document no. 30 REPORT OF WORK ACCIDENT

Document no. 31 REPORT OF MEDICAL LEAVE /121  
Document no. 32 REPORT OF MEDICAL DISCHARGE  
Document no. 33 REPORT OF DISCHARGE OR DEATH RESULTING FROM  
ACCIDENTS  
Document no. 34 RECORD OF WORK ACCIDENTS AND OCCUPATIONAL  
ILLNESSES  
Document no. 35 MORBIDITY AND MORTALITY DATA FOR WORK  
ACCIDENTS AND OCCUPATIONAL ILLNESSES  
Document no. 36 INDUSTRIAL CLINIC REPORT  
Document no. 37 REQUEST FOR HEALTH CARE  
Document no. 38 DECLARATION OF OCCUPATIONAL ILLNESS  
Document no. 39 REPORT OF OCCUPATIONAL ILLNESS  
Document no. 40 REPORT OF OCCUPATIONAL ILLNESS LEADING TO  
DISABILITY OR DEATH  
Document no. 41 REPORT OF RESULTS  
Document no. 42 REPORT OF BRIEF ABSENCE FOR MEDICAL REASONS

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Research

■ MEDICAL SERVICE

### CLINICAL WORK HISTORY

Case no.: \_\_\_\_\_

Registratiin no.: \_\_\_\_\_

Date: \_\_\_\_\_

First Name: \_\_\_\_\_

Middle Name: \_\_\_\_\_

Last Name: \_\_\_\_\_ State I.D. No.: \_\_\_\_\_

Social Security No.: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Place of Birth: \_\_\_\_\_

Sex: \_\_\_\_\_ Blood Group and Rh factor: \_\_\_\_\_

Date of starting work: \_\_\_\_\_ Date of leave: \_\_\_\_\_

Cause of leave: \_\_\_\_\_

REMARKS: \_\_\_\_\_

# FAMILY HISTORY

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Relationship	Code	Illness or Cause of Death	Age

# PERSONAL HISTORY

Code	Illness/Accidents/Operations	Age

## Allergies

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Code	Allergen	Confirmation

## Immunizations

Vaccine	Dose 1	Dose 2	Dose 3	Dose 4	Dose 5	Dose 6

## /125

[illegible][illegible]

(1) TIPO    1: Work entry  
             2: Ordinary periodic  
             3: Special periodic  
             4: Return to work  
             5: Termination of  
             employment

6: After end of employment  
7: change of work place  
8: Request of personnel  
9: Request of worker  
10: On advice of Medical Service











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MEDICAL SERVICE  
  
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Forenames and surnames	Case No.

RECORD OF ABSENTEEISM

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1) TYPE      EC: Common Illness (Enfermedad Commun)  
             AC: Non-work Accident  
             GE: Gestation

1) TYPE     AT: Work Accident (Accident de Trabajo)  
             IT: Accident en route ("in itinere")  
             RA: Recurrence of Accident

## PROFESSIONAL ILLNESSES

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No.	Type (1)	Diagnosis	Leave	Discharge	Days Leave	Days Lost

(1) TYPE: EP: Occupational Illness (Enfermedad Profesional)  
ET: Illness Resulting from Work  
(Enfermedad derivada del trabajo)

## COMPLEMENTARY INFORMATION

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Forenames and surnames	Case No.

WORK HISTORY

## 1. Occupation and work hazards

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[illegible]



Title: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Professional history (in chronological order, including unemployment

Date	Occupation	Hazards	Total time

Other jobs at the same time: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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Forenames and surname	Case No.

### IDENTIFICATION AND BIOGRAPHICAL DATA

Date of birth: \_\_\_\_\_

Place of birth: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_

Post code: \_\_\_\_\_ Telephone: \_\_\_\_\_

Sex: \_\_\_\_\_ Civil status: \_\_\_\_\_ No. children \_\_\_\_\_ No. siblings: \_\_\_\_\_

Military service: \_\_\_\_\_ Cause for exemption: \_\_\_\_\_

Health care area: \_\_\_\_\_ Social Security No.: \_\_\_\_\_

Head doctor: \_\_\_\_\_

Health center: \_\_\_\_\_ Hospital: \_\_\_\_\_

Blood group: \_\_\_\_\_ Rh: \_\_\_\_\_ Donor: Yes ☐ No ☐

Date of starting work here: \_\_\_\_\_ Date of leaving: \_\_\_\_\_

Cause of leaving: \_\_\_\_\_

Date of death: \_\_\_\_\_ Cause: \_\_\_\_\_

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and Technological  
Research

■ MEDICAL SERVICE

Forenames and surname	Case No.

### Medical Examination

In-house worker ☐

Outside worker ☐

#### Type of Examination

At entry	<input type="checkbox"/>	Return to work	<input type="checkbox"/>	Requested by worker	<input type="checkbox"/>
Periodic, ordinary	<input type="checkbox"/>	End of employment	<input type="checkbox"/>	Requested by personnel	
Periodic, special	<input type="checkbox"/>	After employment	<input type="checkbox"/>	department	<input type="checkbox"/>
Change of place	<input type="checkbox"/>			Requested by doctor	<input type="checkbox"/>

#### Profile

Entry ☐      Specific risks \_\_\_\_\_

Man	< 45 years	Woman	< 45 years
	> 45 years		> 45 years

#### Interview

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Habits

Tobacco    Smoker    ☐    Years smoking    ☐    Cigarettes / day    ☐  
              Non-smoker    ☐    Years not smoking    ☐    Cigars / day    ☐

Alcohol    Never drank    ☐    Has not drunk for (time): \_\_\_\_\_  
              Drinks occasionally    ☐    Regular weekend drinker    ☐  
              Drinks daily    ☐    Started drinking at (age): ☐

☐ c.c./day    ☐ alcohol content    ☐ grams of alcohol  
☐    ☐    ☐    Daily total ☐  
☐    ☐    ☐

Others    \_\_\_\_\_: a little ☐    moderately ☐    a good deal ☐  
 (specify)    \_\_\_\_\_:    ☐    ☐    ☐  
              \_\_\_\_\_:    ☐    ☐    ☐

Diet    Eats anything ☐    Can't eat: \_\_\_\_\_  
              Special diet-specify: \_\_\_\_\_

Coffee or tea    <2 cups ☐    2-5 cups ☐    >6 cups ☐

Medications: \_\_\_\_\_

Psychotropic drugs: \_\_\_\_\_

Sport:    Does not    Regularly    Exercises  
              exercise ☐    exercises ☐    a lot    ☐

Summary: \_\_\_\_\_

## EXAMINATION

1. Measurements

Actual Weight	Height	Ideal Weight	% Over weight	Strength			
				Right Hand	Left Hand	Back	Shoulders

Body Type:    Median ☐    Athletic ☐    Thin ☐    Asthenic ☐

REMARKS: \_\_\_\_\_

Skin-Marks

	Yes	No		Yes	No		Yes	No
Color change:	<input type="checkbox"/>	<input type="checkbox"/>	Pruritis:	<input type="checkbox"/>	<input type="checkbox"/>	Glandular swelling:		
Spots:	<input type="checkbox"/>	<input type="checkbox"/>	Eczemas:	<input type="checkbox"/>	<input type="checkbox"/>	Axillary	<input type="checkbox"/>	<input type="checkbox"/>
Scars:	<input type="checkbox"/>	<input type="checkbox"/>	Warts:	<input type="checkbox"/>	<input type="checkbox"/>	Superclavicular/ neck:	<input type="checkbox"/>	<input type="checkbox"/>
						Inguinal:	<input type="checkbox"/>	<input type="checkbox"/>
						Submaxillary:	<input type="checkbox"/>	<input type="checkbox"/>

Summary: \_\_\_\_\_

3. Cardiovascular-Respiratory

F.C.:	T.A.:	T.A.E.:	Oscillometry	Right	/	/
				Left	/	/

	Yes	No		Nrml	Abnml		Nrml	Abnml
Cough	<input type="checkbox"/>	<input type="checkbox"/>	Upper Vasosystem:	<input type="checkbox"/>	<input type="checkbox"/>	Radial pulse:	<input type="checkbox"/>	<input type="checkbox"/>
Spitting	<input type="checkbox"/>	<input type="checkbox"/>	Cardiac artery:	<input type="checkbox"/>	<input type="checkbox"/>	Posterior tibial pulse	<input type="checkbox"/>	<input type="checkbox"/>
Spitting blood	<input type="checkbox"/>	<input type="checkbox"/>	Pulmonary artery:	<input type="checkbox"/>	<input type="checkbox"/>	Pedial pulse	<input type="checkbox"/>	<input type="checkbox"/>
Difficulty breathing	<input type="checkbox"/>	<input type="checkbox"/>	Carotid artery	<input type="checkbox"/>	<input type="checkbox"/>	Carotid pulse	<input type="checkbox"/>	<input type="checkbox"/>
Cyanosis	<input type="checkbox"/>	<input type="checkbox"/>	Abdominal artery	<input type="checkbox"/>	<input type="checkbox"/>	Femoral pulse	<input type="checkbox"/>	<input type="checkbox"/>
Chest pains	<input type="checkbox"/>	<input type="checkbox"/>						
Palpitations	<input type="checkbox"/>	<input type="checkbox"/>	E.C.G.:	_____				
Gyncopies	<input type="checkbox"/>	<input type="checkbox"/>	Espirometry:	_____				
Edemas	<input type="checkbox"/>	<input type="checkbox"/>						
Varicies	<input type="checkbox"/>	<input type="checkbox"/>	RX Thorax:	_____				

Summary: \_\_\_\_\_

4. Digestion

Dentition:	Nrml: <input type="checkbox"/>	Missing Teeth: <input type="checkbox"/>	Partial Plate: <input type="checkbox"/>	Full Plate: <input type="checkbox"/>		
					Yes	No
Tongue:	Nrml <input type="checkbox"/>	Abnml <input type="checkbox"/>	Abdominal pain:		<input type="checkbox"/>	<input type="checkbox"/>
Swallowing:	<input type="checkbox"/>	<input type="checkbox"/>	Hemorrhoids:		<input type="checkbox"/>	<input type="checkbox"/>
Digestion:	<input type="checkbox"/>	<input type="checkbox"/>	Hernia:		<input type="checkbox"/>	<input type="checkbox"/>
Evacuation:	<input type="checkbox"/>	<input type="checkbox"/>	Fistulas:		<input type="checkbox"/>	<input type="checkbox"/>
Abdominal						
palpation:	<input type="checkbox"/>	<input type="checkbox"/>	Ichtericia:		<input type="checkbox"/>	<input type="checkbox"/>
Liver						
palpation:	<input type="checkbox"/>	<input type="checkbox"/>	Bleeding:		<input type="checkbox"/>	<input type="checkbox"/>
Lower Abdom.						
palpation:	<input type="checkbox"/>	<input type="checkbox"/>	Hair:		<input type="checkbox"/>	<input type="checkbox"/>

Summary: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. Nephrology

	Yes	No		Yes	No
Backache:	<input type="checkbox"/>	<input type="checkbox"/>	Night urination:	<input type="checkbox"/>	<input type="checkbox"/>
Bloody urine:	<input type="checkbox"/>	<input type="checkbox"/>	Oliguria:	<input type="checkbox"/>	<input type="checkbox"/>
Dysuria:	<input type="checkbox"/>	<input type="checkbox"/>	Polyuria:	<input type="checkbox"/>	<input type="checkbox"/>
Retention:	<input type="checkbox"/>	<input type="checkbox"/>	Frequent urination:	<input type="checkbox"/>	<input type="checkbox"/>

Renal percussion: Normal ☐ Painful ☐

Summary: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. Genitalia:

				Yes	No		Yes	No	
Male	♂	Nrml <input type="checkbox"/>	Abnml <input type="checkbox"/>	Dysmenorrhea:	<input type="checkbox"/>	<input type="checkbox"/>	Menstrual cramps:	<input type="checkbox"/>	<input type="checkbox"/>
Female	♀	<input type="checkbox"/>	<input type="checkbox"/>	Leucorrhea:	<input type="checkbox"/>	<input type="checkbox"/>	Bleeding:	<input type="checkbox"/>	<input type="checkbox"/>
Breasts		<input type="checkbox"/>	<input type="checkbox"/>	Pruritis:	<input type="checkbox"/>	<input type="checkbox"/>	Pregnancy:	<input type="checkbox"/>	<input type="checkbox"/>

Contraceptives: Hormonal ☐ Mechanical ☐ Chemical ☐ Surgical ☐ IUD ☐ Other ☐

Age of Menarche	Menstrual Cycle	Age at Climacteric	Year of Last Period	Pregnancies	Abortions	Live births

Summary: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7. Locomotion:

E.E.S.S. Inspection:	Nrml <input type="checkbox"/>	Abnml <input type="checkbox"/>	E.E.S.S. Mobility:	Nrml <input type="checkbox"/>	Abnml <input type="checkbox"/>
E.E.I.I. Inspection:	<input type="checkbox"/>	<input type="checkbox"/>	E.E.I.I. Mobility:	<input type="checkbox"/>	<input type="checkbox"/>
Hands Inspection:	<input type="checkbox"/>	<input type="checkbox"/>	Hands Mobility:	<input type="checkbox"/>	<input type="checkbox"/>
Spinal Col. Inspection:	<input type="checkbox"/>	<input type="checkbox"/>	Spinal Mobility:	<input type="checkbox"/>	<input type="checkbox"/>
Foot at rest:	<input type="checkbox"/>	<input type="checkbox"/>	Walking/Coordination:	<input type="checkbox"/>	<input type="checkbox"/>

Summary: \_\_\_\_\_

8. Nervous System:

				Yes	No
Evenness of skull:	Nrml <input type="checkbox"/>	Abnml <input type="checkbox"/>	Head:	<input type="checkbox"/>	<input type="checkbox"/>
Skeletal reflexes:	<input type="checkbox"/>	<input type="checkbox"/>	Dizziness:	<input type="checkbox"/>	<input type="checkbox"/>
Skin reflexes:	<input type="checkbox"/>	<input type="checkbox"/>	Shaking:	<input type="checkbox"/>	<input type="checkbox"/>
Romberg:	<input type="checkbox"/>	<input type="checkbox"/>	Paresthesia:	<input type="checkbox"/>	<input type="checkbox"/>
Nose-finger test:	<input type="checkbox"/>	<input type="checkbox"/>	Poor tone:	<input type="checkbox"/>	<input type="checkbox"/>
Sensitivity:	<input type="checkbox"/>	<input type="checkbox"/>	Memory changes:	<input type="checkbox"/>	<input type="checkbox"/>

Summary: \_\_\_\_\_

9. Vision:

	Yes	No		Yes	No			
Floater:	<input type="checkbox"/>	<input type="checkbox"/>	Double vision:	<input type="checkbox"/>	<input type="checkbox"/>	Eye exam:	Nrml <input type="checkbox"/>	Abnml <input type="checkbox"/>
Nystagmus:	<input type="checkbox"/>	<input type="checkbox"/>	Astigmatism:	<input type="checkbox"/>	<input type="checkbox"/>	Lids:	<input type="checkbox"/>	<input type="checkbox"/>
Epitore:	<input type="checkbox"/>	<input type="checkbox"/>	Myopia:	<input type="checkbox"/>	<input type="checkbox"/>	Conjunctiva:	<input type="checkbox"/>	<input type="checkbox"/>
Itching:	<input type="checkbox"/>	<input type="checkbox"/>	Farsighted:	<input type="checkbox"/>	<input type="checkbox"/>	Pupils:	<input type="checkbox"/>	<input type="checkbox"/>
Cataracts:	<input type="checkbox"/>	<input type="checkbox"/>	Presbyopia:	<input type="checkbox"/>	<input type="checkbox"/>	Mobility:	<input type="checkbox"/>	<input type="checkbox"/>
H.T.O.:	<input type="checkbox"/>	<input type="checkbox"/>	Optical corr.:	<input type="checkbox"/>	<input type="checkbox"/>	Color Vision:	<input type="checkbox"/>	<input type="checkbox"/>
Glasses <input type="checkbox"/>			Contact Lenses <input type="checkbox"/>			Date of last examination	____/____/____	

Summary: \_\_\_\_\_



10. Otorhynology:

Ears:	Normal <input type="checkbox"/>	Abnormal <input type="checkbox"/>	Ear ache:	Normal <input type="checkbox"/>	Abnormal <input type="checkbox"/>
Nose:	<input type="checkbox"/>	<input type="checkbox"/>	Pitch:	<input type="checkbox"/>	<input type="checkbox"/>
Throat:	<input type="checkbox"/>	<input type="checkbox"/>	Poor hearing:	<input type="checkbox"/>	<input type="checkbox"/>
Smell:	<input type="checkbox"/>	<input type="checkbox"/>	Bad speech:	<input type="checkbox"/>	<input type="checkbox"/>
Audiometry	<input type="checkbox"/>	<input type="checkbox"/>	Deviated septum:	<input type="checkbox"/>	<input type="checkbox"/>

? : \_\_\_\_\_ Weber: \_\_\_\_\_

Summary: \_\_\_\_\_

11. Endocrine System:

	Yes	No			
Diabetes:	<input type="checkbox"/>	<input type="checkbox"/>	Thyroid:	Normal <input type="checkbox"/>	Abnormal <input type="checkbox"/>
Obesity:	<input type="checkbox"/>	<input type="checkbox"/>	Sweating:	<input type="checkbox"/>	<input type="checkbox"/>
Weight loss:	<input type="checkbox"/>	<input type="checkbox"/>	Skeletal conformation:	<input type="checkbox"/>	<input type="checkbox"/>
Hirsutiness:	<input type="checkbox"/>	<input type="checkbox"/>	Distribution of body hair:	<input type="checkbox"/>	<input type="checkbox"/>

Summary: \_\_\_\_\_

12. Psychopathology:

General impression: Good ☐ Unfavorable ☐ Coopertiveness: Good ☐ Poor ☐

## Speech and Pronuciation

Correct ☐ Abnormal ☐ Changes in sleeping habits: yes ☐ no ☐

Psychological tests:

Summary: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Clinical judgement: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Medical fitness for work: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Examining Doctor: \_\_\_\_\_

Forenames and Surname	Case Number

## Blood Analysis

Blood Group ____ Rh ____	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
hemate										
hemoglobin										
hematocrit										
VCM										
HCM										
CHCM										
RDW										
leucocytes										
platelets										
VPM										
reticulocytes										
lymphocytes %										
crooked %										
segmented %										
esinophils %										
basophils %										
monocytes %										
%										
%										
%										
lymphocytes										
crooked										
segmented										
esinophils										
basophils										
monocytes										

	red series									
	white series									
	platelets									
	coagulation time									
	bleeding time									
	prothrombin time									
	thrombin time									
	fibrinogen									
	clot refraction									
	capillary fragility									
RG first hour										
Rg second hour										
Katz test										
REMARKS										

Forenames and Surname	Case Number

## BIOCHEMICAL ANALYSIS

	Date	Date	Date	Date	Date	Date	Date	Date	Date
glucose									
urea									
creatinine									
uric acid									
total cholesterol									
HDL cholesterol									
LDL cholesterol									
triglycerides									
total lipids									
GOT									
GPT									
GGT%									
total bilirubin									
direct bilirubin									
indirect bilirubin									
alkaline phosphatase									
total acid phosphatase									
prostatic acid phosphatase									
CPK									
LDH									
amylase									
serum calcium									
serum iron									
total proteins									
sodium									
potassium									
chlorine									
ionic calcium									
phosphorus									
metahemoglobin									

	albumine									
	$\alpha_1$ globulin									
	$\alpha_2$ globulin									
	$\beta$ globulin									
	albuminoglobulin									
REMARKS										

## CIEMAT - MEDICAL SERVICE

Forename and Surname	Case No.

## IMMUNOLOGICAL ANALYSIS

	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
IgG IgA IgM  VIH VIH Confirm.  HBs Ag Anti HBs Ag Anti HBc Ag Pregnancy test  PCR FR ASLO  VDRL Sera:equinoc- cocus Sera:brucel- losis Sera:rubeola Sera: S.typhosz Sera:S. para- typhosa R.Mantoux									

## CIEMAT - MEDICAL SERVICE

Forenames and Surname	Case Number

## URINALYSIS

	Date	Date	Date	Date	Date	Date	Date	Date	Date
density									
pH									
glucose									
proteins									
ketonic cells									
bilirubin									
urobilinogen									
nitrites									
leucocytes									
erythrocytes									
leucocytes									
hemate									
cells									
crystals									
(illegible)									
precipitates									
hyaline mucus									
others									
stones									



urine culture									
antibody analysis									
REMARKS									

### FECES ANALYSIS

S.O.H.	sample 1								
	sample 2								
	sample 3								
parasitology									
mycology									
bacteriology									
REMARKS									

CIEMAT  
MEDICAL SERVICE

Document no. 1

# REQUEST FOR MEDICAL EXAMINATION

From: \_\_\_\_\_ To: Medical Service

Surname and forenames: \_\_\_\_\_

State Id. No.: \_\_\_\_\_ Administrative code: \_\_\_\_\_

Personnel: CIEMAT ☐ Outside ☐

Occupationally exposed to radiation: yes ☐ no ☐

Work place: \_\_\_\_\_

## TYPE OF EXAMINATION

- |  |  |
|--|--|
| <input type="checkbox"/> Starting job            | <input type="checkbox"/> Change of job         |
| <input type="checkbox"/> Ordinary periodic       | <input type="checkbox"/> Worker request        |
| <input type="checkbox"/> Special periodic Worker | <input type="checkbox"/> Request by Personnel  |
| <input type="checkbox"/> Return to work          | <input type="checkbox"/> Following termination |

Period of absence: \_\_\_\_\_

Reason: \_\_\_\_\_ (1)

☐ Termination of employment

Date of termination: \_\_\_\_\_

Reason: \_\_\_\_\_ (2)

Attatched find:

- ☐ Worker Id. slip (3)
- ☐ Work place Id. slip (4)
- ☐ Classification slip (5)
- ☐ Radiological hazard slip (6)

Madrid, the \_\_\_\_ of \_\_\_\_\_ 199\_\_\_\_

Signed:

Instructions on reverse (p /149)

## Instructions for filling in form

## 1) Reason:

- Leave for common illness, work accident, occupational illness, maternity, etc.
- Leave of absence
- Work completed
- Other (specify)

## 2) Reason:

- Mandatory retirement
- Voluntary retirement
- Voluntary leave
- Special leave
- Military service or equivalent service
- Transferred to another Agency
- Contract finished
- Requested leave
- Fired
- Other (specify)

## 3) This is attached when:

- CIEMAT staff
  - Are discharged from the Agency
  - Change their working place
  - Change their Agency affiliation
- Outside staff
  - First examination by the Service
  - Change of working place

## 4) This is attached when:

- CIEMAT staff
  - Are discharged from the Agency
  - Change their working place
  - Change their Agency affiliation
- Outside staff
  - First examination by the Service
  - Change of working place

5) A copy of the Classification slip (PR-XR-02-01), supplied by the CIEMAT Radiological Protection Service for own staff. A Slip of radiological hazards supplied by the relevant Radiological Protection Service, for outside staff.

Attached for examinations of workers with occupational exposure to radiation when:

- CIEMAT staff - Starting job, Ordinary periodic, Special periodic, Return to work, if the conditions have changed.
  - Special exam for change of work place
- Outside staff - First exam by Service
  - Change in radiological conditions of working place

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---

WORKER IDENTIFICATION SLIP

Surname and forenames \_\_\_\_\_

State Id. no. \_\_\_\_\_

Birth date \_\_\_\_\_

Birthplace \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

Province \_\_\_\_\_

Post code \_\_\_\_\_

Telephone \_\_\_\_\_

Sex (1) Civil status (2) Children m/f /

Studies: \_\_\_\_\_ (3)

Entry no: \_\_\_\_\_ SS no. \_\_\_\_\_

Entry date \_\_\_\_\_

Leaving date \_\_\_\_\_ Cause \_\_\_\_\_ (4)

Date of death \_\_\_\_\_ Cause \_\_\_\_\_

Madrid, the of 199\_

Signed:

Instructions on reverse (p /151)

## INSTRUCTIONS FOR FILLING IN

To be filled in by the Personnel Director, for CIEMAT staff, and for the equivalent department for outside staff.

- |             |               |          |              |
|-------------|---------------|----------|--------------|
| 1) Man      | [H] (hombre)  | Woman    | [M] (mujer)  |
| 2) Bachelor | [S] (soltero) | Married  | [C] (casado) |
| Widowed     | [V] (viudo)   | Divorced | [D]          |
| Separated   | [S]           |          |              |
- 3) Level of training
- no higher education
  - Grade I professional certificate, high school or equivalent
  - Grade II professional certificate, college or equivalent
  - Master's
  - Doctorate
- 4) Cause:
- Mandatory retirement
  - Voluntary retirement
  - Voluntary leave
  - Special leave
  - Military or equivalent service
  - Transferr to other Agency
  - End of contract
  - Leave by request
  - Fired
  - Other (specify)

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WORK PLACE IDENTIFICATION SLIP

FILLED IN BY: PERSONNEL DIRECTOR [ ] TECHNICAL SECRETARY [ ]

Surname and forenames \_\_\_\_\_

State Id. no.

CIEMAT staff

Profession:

Category:

Facility/Office

Organization code

Program/Area of activity

Building

Plant

Outbuilding

Tel.

OUTSIDE STAFF

Profession

Category

Business

Postal address

Tel.

Department

Section

Date

Signed

FILLED IN BY HEALTH AND SAFETY SERVICE CIEMAT[ ] OUTSIDE[ ]

Job description \_\_\_\_\_

Date

Signed

## WORKING CONDITIONS

ENVIRONMENTAL	RADIATION	IONIZING
	WORKING	NOT IONIZING
CONTAMINANTS	ATMOSPHERE	DUST
		FOG
		SOILS
		GASSES/VAPORES
		BIOLOGICAL CONTAMINANTS

---

WORK	NOISE
	VIBRATION
	ILLUMINATION
	TEMPERATURE/HUMIDITY
ENVIRONMENT	VENTILATION
	FREE WORK AREA
	FREE AIR VOLUME IN WORK AREA
	TIDINESS AND CLEANLINESS
	SANITARY PROVISIONS

---

SAFETY	INSTALLATIONS/MACHINERY
	FIRE PRECAUTIONS
	PERSONAL PROTECTION

---

PHYSICAL	WORKING POSITION
LOAD	PHYSICAL ACTIVITY

---

MENTAL	ATTENTION
LOAD	COMPLEXITY/SPEED
	DELICACY

---

PSYCHO-	INITIATIVE
PHYSICAL	SOCIAL STATUS
FACTORS	EASE OF COMMUNICATION
	RELATIONS WITH LEADERS
	WORK SCHEDULE

---

TO BE FILLED IN BY THE INDUSTRIAL HEALTH AND SAFETY SERVICE

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MEDICAL SERVICE

### RADIOLOGICAL HAZARDS SLIP

Surname and forenames

State Id. no.

RADIOIOLOGICAL PROTECTION SERVICE

PERSONAL DOSIMETRY SERVICE

PROFESSIONAL DATA

Exposure category

Radiological class

Job description

Personal protective equipment

FACILITY DATA

Type

Category

Head of facility

X-RAY SOURCES			SEALED SOURCES		
SOURCE	kV max.	mA max.	% (1)	NUCLIDE EMITTING	A (Bq) % (1)

1) Monthly percentage of job time



NUCLIDE	EMITTING (2)	NON SEALED SOURCES			%(3)	HAZARDS RH RG RS (4)
		A(Bq)	PHYSICAL STATE	CHEMICAL COMPOSITION		

2) alpha, beta, gamma

3) Percentage of monthly job time

4) Risk of: inhalation(RH); Ingestion (RG); Surface contamination (RS).

To be classified as High (H); Medium (M) Low (L)  
[in Spanish: Alto (A): Medio (M) Bajo (B) ]

#### OTHER OCCUPATIONAL EXPOSURE

BUSINESS	TIME	FACILITY	SOURCES	HAZARDS (5)
----------	------	----------	---------	-------------

(5) External, Contamination

#### MEDICAL EXPOSURE

EXPOSURE (6)	SOURCE	DATE	ESTIMATED DOSE (mSv)
--------------	--------	------	----------------------

(6) Radiological diagnosis, Isotope, Radiotherapy

Signed:

MINISTRY OF	Center for Energy	MEDICAL SERVICE
INDUSTRY	Environmental	
TRADE AND	and Technological	
TOURISM	Research	

---

**APPOINTMENT FOR MEDICAL EXAMINATION**

We are going to give you a medical examination, which we explain in the accompanying information sheet.

We request you to appear with this form at the CIEMAT Medical Service (Building 7),

at                      o'clock                      on the                      199\_\_

Chief of Medical Service  
Signed:

Mr/Mrs              Sir/Madam

Madrid, the              of              199\_\_

**If you are unable to attend on  
this date, please contact us  
immediately at tel. 342 62 41**

Name and forenames

State Id no.

Facility/Office

Administrative Cat.

Program/Area of activity

Building

Plant

Outbuilding

Tel

Outside staff ☐ Business

Occupational exposure to radiation    Yes ☐    No ☐

**Type of Examination:**

Job entry

Periodic ordinary

Periodic special

Return to work

Employment terminated

Change of work place

Worker request

Doctor's advice

Request from Personnel

MINISTRY OF	Center for Energy	MEDICAL SERVICE
INDUSTRY	Environmental	
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#### MEDICAL EXAMINATION : INFORMATION SHEET

We are going to give you a medical examination.

This is the main basis of the work of the Medical Service in detection and prevention of any change in your health.

It is imperative that we have your cooperation and good will, in order to carry out the examination as readily and as accurately as possible. For this reason, you should not eat for at least 10 hours before the exam (we suggest that supper the day before should be modest and low in fat), bring a urine sample, and, if you wear them, eyeglasses. You should also bring an identification photo if this is the first time you have taken a medical examination here.

In this examination, the doctor will take a clinical history and give you a complete physical examination. There will be a blood and urine analysis, otoscopy, electrocardiogram, respirometry, and a vision test, which will all be systematically performed. It is also possible that additional complementary tests or analyses will be performed, when considered necessary, according to the results already obtained.

Below, we will ask you a series of questions, which we hope will allow you to provide the doctor with better information, and will result in a more accurate examination. You do not need to write anything; but please think about each of the questions and later you can reply, or ask questions.

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### **FAMILY HISTORY**

Think about the major illnesses your most direct relatives (parents, siblings, grandparents, aunts and uncles, and children) have had, and particularly in your immediate family. If any family member has died, try to remember the cause of death and their age at death.

Frequent Illnesses:

High blood pressure, diabetes, gout, myocardical infarct or angina pectoris, elevated blood cholesterol. Cerebral thrombosis or embolism.

Allergic illnesses, asthma, brohchitis, tuberculosis.

Cancer, leukemias, anemias.

Mental illnesses, epilepsy.

Congenital illnesses, Down's syndrome.

Rheumatic illnesses

Gastrointestinal ulcer, biliary or nephritic colics, hepatitis.

Cateracts, glaucoma.

### **PERSONAL HISTORY**

Have you ever had any major illness?

Have you ever had any surgery?

Have you ever had any accident at work or outside of work?

Are you allergic to anything? Pollen, dust, medicines, etc.

Do you regularly use any medication?

Do you have dental problems? Carries, pyorrhea, etc.

Do you suffer from stomach ache, fevers, poor digestion?

Do you have any intestinal abnormality? Stomach pain, chronic constipation, diarrhea, hemorrhoids, etc.

Have you ever had a bloody stool?

Do you frequently have a runny nose? Do you cough and spit in the morning?

Do you ever feel tired after climbing stairs?

Do you ever feel a pain or a weight in your chest? Do you suffer from palpitations?

Do your legs ever swell?

Do you have prickly sensations or tenderness in your feet?

Do you frequently urinate? Do you have difficulty or pain when you begin urination? Have you ever had dark urine?

Do you suffer from headache?

Have you noticed changes in character, behavior, sleep,  
memory?

Have you had changes in your vision?

Do Have you noticed loss of hearing, buzzing or noise in the  
ears?

Have you had vertigo or dizziness?

Have you ever had an allergic skin reaction or wound?

Have you suffered from joint pains?

Has your weight changed?

Have you felt fatigued, or noticed fever or sweating?

If you have been given a medical examination by the Service before, we would like to inform you of some changes we have made in specific preventative programs, which have the result that everyone no longer is given the same examination, but that the examination is tailored to the specific hazards of the work place and to the personal details of the worker. jFor this reason, please also give thought to your working conditions and to the possible industrial hazards present there, so that your medical examination can proceed as smoothly as possible.

**Thank you very much for your cooperation**

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**MEDICAL QUESTIONNAIRE FOR EXAMINATION AT START OF EMPLOYMENT**

Please read the questionnaire carefully.

Its proper completion is of great assistance in guiding your examination. Mark the answers 'yes' or 'no' with a cross, whichever is more appropriate, and in other cases, give the clearest explanation possible.

Try to give accurate answers, and if you have any question or doubt, please discuss it directly with the doctor.

The information you supply is absolutely confidential, and its use is restricted by the Medical Profession Code of Secrecy.

Thank you very much for your cooperation.

---

**IDENTIFICATION:**

---

Surname

---

Forenames

---

State Id. no.

---

Birth date



**WORK HISTORY**

If you have worked before, we request you to fill out the following table, listing your occupations in chronological order, giving the time worked and the hazards you are aware of, and to which you were exposed (noise, dust, radiation, chemical or biological substances, strong physical forces, etc.)

Occupation	Time	Hazards

Have you ever had any work accident? Give details.

Have you ever had any occupational illness? Give details.



# PERSONAL MEDICAL HISTORY

Have you ever been in hospital?  
When, and for what reason?

Please mark 'yes' or 'no' with an 'x' if you have suffered from any of the following illnesses [sic]

	yes	no		yes	no
Typhoid			mitral stenosis		
paratyphoid			hypertension		
maltese fever			hypotension		
salmonella			cardiac failure		
other intestinal infections			myocardial infarct		
pulmonary tuberculosis			angina pectoris		
other tuberculosis			arrythmia		
herpes			varices		
hepatitis			thrombophlebitis		
swamp fever			bronchitis		
typhus			pneumonia		
syphilis			pleuritis		
hydatic cyst			bronchial asthma		
other infections			silicosis		
cancer			other respiratory illnesses		
benign tumors			oral ulcers		
goiter			dental infections		
diabetes			changes in the digestion		
gout			gastritis		
elevated cholesterol			gastroduodenal ulcer		
anemia			alimentary hemmorage		
depression			appendicitis		
mental illness			perotinitis		
migrane			hernia		
sciatica			irritable bowel		
other nerve illnesses			haemorrhoids		
cereberal stroke			anal fissure or fistula		
spina bifida			hepatic cirrhosis		
other diseases of the nervous system			biliary litiasis		
cataracts			kidney failure		
glaucoma			cystitis		
detatched retina			other kidney diseases		
strabismus			V.D.		
changes in vision			prostatitis		
otitis			orchitis		
vertigo			sterility		
deafness			mammary cysts		
sinusitis			mastitis		
deviated septum			changes in menses		
chronic pharyngitis			menstrual pain		
vocal chord polyps			vaginal infections		
nasal allergies			abortions		
rheumatic fever			ectopic pregnancy		

sebaceous cyst  
eczema  
psoriasis  
hair loss  
other skin diseases  
joint disease  
inflamed joints

yes no

herniated disk  
spinal dislocation  
fractures  
dislocations  
misalignment  
other bone diseases

yes no

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If you have had some other illness not listed, you can mention this below, as well as any other details you think are relevant.

**REMARKS:**

Madrid, the \_\_\_\_\_ of \_\_\_\_\_ 199\_\_\_\_\_

Signed: \_\_\_\_\_

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---

LIST OF WORKERS NOT PRESENT FOR MEDICAL EXAMINATION

Month: \_\_\_\_\_ Sheet: \_\_\_\_\_

Surname and Forenames	Appt 1	Appt 2	Type (1)

Madrid, the \_\_\_\_ of \_\_\_\_ 199\_\_

Cheif of Medical Service

Signed: \_\_\_\_\_

INSTRUCTIONS FOR FILLING IN FORM

1) Type of medical examination (write in relevant code number)

- 1) Starting employment
- 2) Ordinary periodic
- 3) Special periodic
- 4) Return to work
- 5) Termination of employment
- 6) Following termination
- 7) Change of working place
- 8) At request of Personnel
- 9) At doctor's advice

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MEDICAL EXAMINATION SERVICES REQUEST FORM

Date:

Case no.

Surname

Forenames

Type of exam           [ ]

Doctor:

Profile: [ ]   [ ]   [ ]   [ ]   [ ]

---

[ ] Clinical history  
[ ] Medical questionnaire  
[ ] Analysis  
[ ] Electrocardiogram  
[ ] Respirometry  
[ ] Audiometry  
[ ] Vision test  
[ ] Radiological exam

[ ] Ultrasound exam  
[ ] Special exam

[ ] Other examinations

REMARKS:

## INSTRUCTIONS FOR FILLING IN FORM

### TYPE OF MEDICAL EXAMINATION

- 1) Starting employment
- 2) Ordinary periodic
- 3) Special periodic
- 4) Return to work
- 5) Termination of employment
- 6) Following termination
- 7) Change of working place
- 8) At request of Personnel
- 9) At worker's request
- 10) At doctor's advice

### PROFILES:

- 1 Men younger than 45
- 2 Men older than 45
- 3 Women younger than 45
- 4 Women older than 45
- 5 Starting work
- 6 Ionizing radiation
- 7 Biological materials handlers
- 8 Food materials handlers
- 9 Chemical materials handlers
- 10 Noise
- 11 Physical loads
- 12 VDU operators
- 13 Drivers

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# REQUEST SHEET FOR ANALYTIC TESTS

Date

Case no.

Surname and forenames

Service:

Birth date:

Diagnostic:

Requester:

Remarks:

Doctor:

## PROFILES

1 man < 45  
2 man > 45  
3 woman < 45  
4 woman > 45  
5 entry  
6 ionizing rad.  
7 bio. materials  
8 foodstuffs  
9 chem. materials  
11 anemia  
12 anovulatory  
13 joint disease  
14 diabetes  
15 pregnancy  
16 liver function  
17 renal function  
18 HTA  
19 stones  
20 fat metabolism  
21 preoperative

2007 LDL  
2008 triglycerides  
2009 total lipids  
2010 GOT  
2000 GPT  
2012 GGT  
2013 total bilirubin  
2014 direct bilirubin  
2015 indirect  
bilirubin  
2016 alkaline  
phosphatase  
2017 total acid  
phosphatase  
2018 prostatic acid  
phosphatase  
2019 CPK  
2020 LDH-P  
2021 amylase  
2022 serum calcium  
2023 iron  
2024 total proteins  
2025 sodium  
2026 potassium  
2027 chlorine  
2028 ionic calcium  
2029 phosphorus  
2030 metahemoglobin  
2031 glucose tolerance  
3001 lipidogram  
3002 proteinogram  
2002 IgG  
3004 IgA  
3005 IgM  
4001 Coagulation time  
4002 bleeding time  
4003 prothrombin time  
4005 partial  
thromboplast time  
4006 thrombin time

4007 fibrinogen  
4008 clot retraction  
4009 capillary  
fragility  
5001 VIH  
5002 VIH-CONFIRMED  
5003 HA antigen  
5004 HB antibody  
5005 HC antibody  
6001 pregnancy test  
6002 PCR  
6003 FR  
6004 ASLO  
6005 VDRL  
6006 Equinococcus  
ser.  
6007 Brucella ser.  
6008 Rubeola ser.  
6009 Typhoid ser.  
6010 Paratyphoid ser.  
6011 Mantoux reaction  
7001 urine chemistry  
7002 urine sediment  
7006 stones  
7008 antibody profile  
8001 cariotype  
8002 A.R. cariotype  
9001 occult fecal  
blood  
9002 fecal  
parasitology  
9003 fecal mycology  
9004 fecal  
bacteriology  
9501 gynecological  
test

## TESTS

1001 blood chart  
1002 reticulocytes  
1003 cell mix  
1005 VSG  
1006 Type/Rh  
2001 glucose  
2002 urea  
2003 creatinine  
2004 uric acid  
2005 total cholesterol  
2006 HDL















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Doctor:

Specialty:

Tel.

REFERRAL TO SPECIALIST

Case no:

Dear Colleague:

I am sending you for Mr. \_\_\_\_\_  
who works as \_\_\_\_\_  
and whose trade is \_\_\_\_\_  
to examine. My reasons for doing so are

Please send me a medical report (with special attention,  
if called for, to possible restrictions on his occupational  
fitness), to add to the subject's Work Clinical Histor.

With thanks in advance, please accept my best wishes.

Madrid, the \_\_\_\_ of \_\_\_\_ 199\_\_

CHEIF OF THE MEDICAL SERVICE

Signed \_\_\_\_\_

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MEDICAL REPORT

Case no. \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

SUMMARY OF CLINICAL HISTORY

WORK HISTORY

Identification of work place

Professional history

FAMILY HISTORY

PERSONAL HISTORY

INTERVIEW



CLINICAL EXAMINATION

Biometry    \_\_\_ Weight  
             \_\_\_ Height  
             \_\_\_ Ideal weight

\_\_\_ Pulse  
\_\_\_ Blood Pressure  
\_\_\_ Ergometer

COMPLEMENTARY EXAMINATIONS

ECG--

AUDIOMETRY--

VISION TEST--

RADIOLOGICAL STUDY--

ULTRASOUND EXAM--

ANALYSES--

OTHER TESTS--

CLINICAL JUDGEMENT

RECOMMENDATIONS

FITNESS FOR WORK

Madrid, the        of        199\_\_  
CHEIF OF THE MEDICAL SERVICE

Signed: \_\_\_\_\_

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MEDICAL REPORT

Case no. \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

SUMMARY OF CLINICAL HISTORY

WORK HISTORY

Identification of work place

Professional history

FAMILY HISTORY

PERSONAL HISTORY

INTERVIEW

CLINICAL EXAMINATION

Biometry   \_\_\_ Weight  
             \_\_\_ Height  
             \_\_\_ Ideal weight

\_\_\_ Pulse  
\_\_\_ Blood Pressure  
\_\_\_ Ergometer

COMPLEMENTARY EXAMINATIONS

ECG-

AUDIOMETRY-

VISION TEST-

RADIOLOGICAL STUDY-

ULTRASOUND EXAM-

ANALYSES-

OTHER TESTS-

CLINICAL JUDGEMENT

RECOMMENDATIONS

FITNESS FOR WORK

Madrid, the      of      199\_\_  
CHEIF OF THE MEDICAL SERVICE

Signed: \_\_\_\_\_

CIEMAT  
MEDICAL SERVICE

Document 19a

# CERTIFICATE OF FITNESS FOR THE WORK PLACE

## PLACE OF WORK:

Profession:  
Category:  
Organizational no.

Facility:  
Area of activity:

A medical examination has been performed on

Mr. \_

State Id. no. \_

who, for the above place of work

is considered:

☐ FIT

RESTRICTIONS: ☐ Permanent

☐ Temporary

☐ UNFIT

RESTRICTIONS FOR THE PLACE OF WORK \_

--

--

--

SUGGESTED CHANGE IN PLACE OF WORK \_

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Madrid, the      of      199 \_

CHEIF OF THE UNION OF INDUSTRIAL HEALTH

Signed \_\_\_\_\_

Form for CIEMAT personnel

#### MEDICAL CLASSIFICATION

- FIT - A worker whose psychophysical conditions are adequate, from the medical point of view, to working in the situation he is being assigned.

- FIT, WITH RESTRICTIONS - A worker whose psychophysical conditions are, in general, adequate for working in the situation he is being assigned, but there exist, nevertheless medical reasons for restricting his performance of certain tasks which are not fundamental to the work involved in this position.

- UNFIT - A worker whose psychophysical conditions are inadequate, from the medical point of view, for the work situation he is being assigned.

CIEMAT

Document no. 19b

MEDICAL SERVICE SPECIALIZING IN  
MEDICAL MONITORING OF PERSONNEL  
OCCUPATIONALLY EXPOSED TO RADIATION

## CERTIFICATE OF FITNESS FOR PLACE OF WORK

PLACE OF WORK:

Profession:

Facility:

Category:

Area of activity:

Organizational no.

A medical examination has been performed on

Mr. \_\_

State Id. no. \_\_ who, for the above place of  
work, is considered (as established in Article 44 of the  
current Regulations on Health Protection from Ionizing  
Radiation):

☐ FIT☐ UNFIT☐ UNDER OBSERVATION

SUGGESTED CHANGE IN PLACE OF WORK \_\_\_\_\_

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Madrid, the of 199\_\_

CHEIF OF THE SPECIALIZED MEDICAL SERVICE

Signed: \_\_\_\_\_

Form for CIEMAT personnel



### **MEDICAL CLASSIFICATION**

- FIT - A worker whose psychophysical conditions are adequate, from the medical point of view, to working in the situation he is being assigned.
  
- FIT, WITH RESTRICTIONS - A worker whose psychophysical conditions are, in general, adequate for working in the situation he is being assigned, but there exist, nevertheless medical reasons for restricting his performance of certain tasks which are not fundamental to the work involved in this position.
  
- UNFIT - A worker whose psychophysical conditions are inadequate, from the medical point of view, for the work situation he is being assigned.

CIEMAT  
MEDICAL SERVICE

Document 19c

## CERTIFICATE OF FITNESS FOR THE WORK PLACE

PLACE OF WORK:

Profession:  
Category:

Employer:  
Department:  
Section:

A medical examination has been performed on  
Mr. \_\_  
State Id. no. \_\_ who, for the above place of work  
is considered:

☐ FIT

RESTRICTIONS: ☐ Permanent  
☐ Temporary

☐ UNFIT

RESTRICTIONS FOR THE PLACE OF WORK\_\_

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SUGGESTED CHANGE IN PLACE OF WORK\_\_

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Madrid, the of 199\_\_

CHIEF OF THE UNION OF INDUSTRIAL HEALTH

Signed\_\_

Form for personnel outside CIEMAT

CIEMAT

Document no. 19d

MEDICAL SERVICE SPECIALIZING IN  
MEDICAL MONITORING OF PERSONNEL  
OCCUPATIONALLY EXPOSED TO RADIATION

## CERTIFICATE OF FITNESS FOR PLACE OF WORK

PLACE OF WORK:

Profession:

Employer:

Category:

Department:

Radiation exposure:

Section:

A medical examination has been performed on

Mr. \_\_

State Id. no. \_\_ who, for the above place of  
work, is considered (as established in Article 44 of the  
current Regulations on Health Protection from Ionizing  
Radiation):

☐ FIT☐ UNFIT☐ UNDER OBSERVATION

SUGGESTED CHANGE IN PLACE OF WORK\_\_

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Madrid, the of 199\_\_

CHEIF OF THE SPECIALIZED MEDICAL SERVICE

Signed: \_\_

Form for personnel outside CIEMAT

### **MEDICAL CLASSIFICATION**

- FIT - A worker whose psychophysical conditions are adequate, from the medical point of view, to working in the situation he is being assigned.
  
- FIT, WITH RESTRICTIONS - A worker whose psychophysical conditions are, in general, adequate for working in the situation he is being assigned, but there exist, nevertheless medical reasons for restricting his performance of certain tasks which are not fundamental to the work involved in this position.
  
- UNFIT - A worker whose psychophysical conditions are inadequate, from the medical point of view, for the work situation he is being assigned.

CIEMAT

MEDICAL SERVICE SPECIALIZING IN  
MEDICAL MONITORING OF PERSONNEL  
OCCUPATIONALLY EXPOSED TO RADIATION

## CERTIFICATE OF FITNESS FOR PLACE OF WORK

## PLACE OF WORK:

Profession:

Employer:

Category:

Department:

Radiation exposure:

Section:

A medical examination has been performed on

Mr. \_\_

State Id. no. \_\_ who, for the above place of  
work, is considered (as established in Article 44 of the  
current Regulations on Health Protection from Ionizing  
Radiation):

☐ FIT☐ UNFIT☐ UNDER OBSERVATION

SUGGESTED CHANGE IN PLACE OF WORK \_\_

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Madrid, the of 199\_\_

CHEIF OF THE SPECIALIZED MEDICAL SERVICE

Signed: \_\_

Form for personnel outside CIEMAT

#### MEDICAL CLASSIFICATION

- FIT - A worker whose psychophysical conditions are adequate, from the medical point of view, to working in the situation he is being assigned.

- FIT, WITH RESTRICTIONS - A worker whose psychophysical conditions are, in general, adequate for working in the situation he is being assigned, but there exist, nevertheless medical reasons for restricting his performance of certain tasks which are not fundamental to the work involved in this position.

- UNFIT - A worker whose psychophysical conditions are inadequate, from the medical point of view, for the work situation he is being assigned.

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# WORK ACCIDENT REPORT

Surname and forenames

State Id. no.

Employer

Activity at CIEMAT

## ACCIDENT DATA

Date

Hour (1-24) [ ]

Usual job? Yes [ ] No [ ]

Work hour (1-8) [ ]

Location (1) [ ]

Day of Week (1-7) [ ]

Address

Witnesses

—

Description

—

—

—

How it occurred (2) [ ] Material involved

—

## CARE DATA

Wound description (3) [ ] Seriousness of wound (5) [ ]

Body part injured (4) [ ] Outpatient treatment [ ]

Hospital treatment (location)

Care given

—

—

Madrid the of 199\_

CHEIF OF THE MEDICAL SERVICE

Signed \_\_\_\_\_

**INSTRUCTIONS FOR FILLING OUT FORM**

- 1) Location of accident
  - 1 Usual work place
  - 2 Gone to another location during work day
  - 3 en route
  - 4 on another work site

In cases 2,3, and 4 indicate the name and address of the location.

- 2) How accident occurred:
  - 01 Falls to a lower level
  - 02 Falls to same level
  - 03 Objects falling or tipping over
  - 04 Objects being dropped
  - 05 Objects falling from grasp
  - 06 Tripping
  - 07 Collision with immovable object
  - 08 Collision with movable object
  - 09 Blows from objects or tools
  - 10 Hit by fragments or particles
  - 11 Caught in objects
  - 12 Caught by motion machinery, vehicles, etc
  - 13 Overexertion
  - 14 Exposure to extreme air temperature
  - 15 Touching objects at extreme temperature
  - 16 Electric shock
  - 17 Exposure to harmful substances
  - 18 Exposure to caustic or corrosive substances
  - 19 Exposure to radiation
  - 20 Explosion
  - 21 Fire
  - 22 Accidents caused by animals
  - 23 Struck by vehicle
- 3) Description of injury
  - 30 Fracture
  - 31 Dislocation
  - 32 Twist, sprain, swelling
  - 33 Lumbago
  - 34 Hernia
  - 35 Concussion/internal injury
  - 36 Amputation/loss of eye
  - 37 Other wound
  - 38 Superficial wound
  - 39 Contusion/bruise
  - 40 Foreign bodies in eye
  - 41 Conjunctivitis



- 42 Burn
- 43 Poisoning
- 44 Exposure to substance in atmosphere
- 45 Asphyxiation
- 46 Effects of electricity
- 47 Effects of radiation
- 48 Multiple injuries
- 49 Infarcts, stroke or other disease without trauma
- 4) Part of body injured:
  - 60 Cranium
  - 61 Face, except eyes
  - 62 Eyes
  - 63 Neck
  - 64 Thorax, back, ribs
  - 65 Lumbar region and abdomen
  - 66 Genitalia
  - 67 Hands
  - 68 Arms and collar bones
  - 69 Feet
  - 70 Legs and hips
  - 71 Multiple injuries
  - 72 Internal organs
- 5) Seriousness of injury
  - 1 Light
  - 2 Serious
  - 3 Very serious
  - 4 Fatal



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REPORT OF WORK ACCIDENTS NOT RESULTING IN MEDICAL LEAVE

Week No. \_\_\_\_\_

No.	Forenames and Surname	V	M	Day	Month	Year	Form (1)	O.C.
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

- (1) Instructions on back  
(2) Organization code

Madrid, the      of 199\_\_\_\_

CHEIF OF THE MEDICAL SERVICE

Signed: \_\_\_\_\_

**INSTRUCTIONS FOR FILLING IN FORM**

## 1) Form of occurrence:

- 01 Falls to a lower level
- 02 Falls to same level
- 03 Objects falling or tipping over
- 04 Objects being dropped
- 05 Objects falling from grasp
- 06 Tripping
- 07 Collision with immovable object
- 08 Collision with movable object
- 09 Blows from objects or tools
- 10 Hit by fragments or particles
- 11 Caught in objects
- 12 Caught by motion machinery, vehicles, etc
- 13 Overexertion
- 14 Exposure to extreme air temperature
- 15 Touching objects at extreme temperature
- 16 Electric shock
- 17 Exposure to harmful substances
- 18 Exposure to caustic or corrosive substances
- 19 Exposure to radiation
- 20 Explosion
- 21 Fire
- 22 Accidents caused by animals
- 23 Struck by vehicle

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**WORK ACCIDENT REPORT**

Surname and forenames

State Id. no.

Profession

Category

Program/Area of activity

Building

Plant

Outbuilding

Tel.

**ACCIDENT DATA**

Date

Hour (1-24) [ ]

Usual job? Yes [ ] No [ ]

Work hour (1-8) [ ]

Location (1) [ ]

Day of Week (1-7) [ ]

Address

Witnesses

--

Description

--

--

How it occurred (2) [ ] Material involved

--

**CARE DATA**

Wound description (3) [ ] Seriousness of wound (5) [ ]

Body part injured (4) [ ] Outpatient treatment [ ]

Hospital treatment (location)

Care given

--

--

Madrid the of 199\_

CHIEF OF THE MEDICAL SERVICE

Signed \_\_\_\_\_

**INSTRUCTIONS FOR FILLING OUT FORM**

- 1) Location of accident
  - 1 Usual work place
  - 2 Gone to another location during work day
  - 3 en route
  - 4 on another work site

In cases 2,3, and 4 indicate the name and address of the location.

- 2) How accident occurred:
  - 01 Falls to a lower level
  - 02 Falls to same level
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  - 04 Objects being dropped
  - 05 Objects falling from grasp
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  - 07 Collision with immovable object
  - 08 Collision with movable object
  - 09 Blows from objects or tools
  - 10 Hit by fragments or particles
  - 11 Caught in objects
  - 12 Caught by motion machinery, vehicles, etc
  - 13 Overexertion
  - 14 Exposure to extreme air temperature
  - 15 Touching objects at extreme temperature
  - 16 Electric shock
  - 17 Exposure to harmful substances
  - 18 Exposure to caustic or corrosive substances
  - 19 Exposure to radiation
  - 20 Explosion
  - 21 Fire
  - 22 Accidents caused by animals
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  - 32 Twist, sprain, swelling
  - 33 Lumbago
  - 34 Hernia
  - 35 Concussion/internal injury
  - 36 Amputation/loss of eye
  - 37 Other wound
  - 38 Superficial wound
  - 39 Contusion/bruise
  - 40 Foreign bodies in eye
  - 41 Conjunctivitis

- 42 Burn
  - 43 Poisoning
  - 44 Exposure to substance in atmosphere
  - 45 Asphyxiation
  - 46 Effects of electricity
  - 47 Effects of radiation
  - 48 Multiple injuries
  - 49 Infarcts, stroke or other disease without trauma
- 4) Part of body injured:
- 60 Cranium
  - 61 Face, except eyes
  - 62 Eyes
  - 63 Neck
  - 64 Thorax, back, ribs
  - 65 Lumbar region and abdomen
  - 66 Genitalia
  - 67 Hands
  - 68 Arms and collar bones
  - 69 Feet
  - 70 Legs and hips
  - 71 Multiple injuries
  - 72 Internal organs
- 5) Seriousness of injury
- 1 Light
  - 2 Serious
  - 3 Very serious
  - 4 Fatal











Month	Year
-------	------

CARE ACTIVITY PERFORMED  
Social Security member for W.A. & O.I.

Name of Member	Number	Address	Town	Province
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DATA FOR W.A. & O.I. CARE

No. of Visits	No. of Hospitalizations	No. of Hospital Days	No. of Analyses	No. of X-rays	No. of Audiometries	No. of Spirometries	No. of Rehab. Sessions

Month	Year
-------	------

NATIONAL HEALTH INSTITUTE  
Data of Preventive Activity  
Social Security member for W.A. & O.I.

Name of Member	Number	Address	Town	Province
----------------	--------	---------	------	----------

Name of Employer	Examinations		Vaccinations		Group Health Education		Research On Industrial Health (2)
	Practical	Industrial Disease Detected (1)	Type	No. of Workers Vaccinated	Interventions	No. of Workers Cared For	

- (1) The number of workers examined and found to have some disease related to their job will be indicated (whether or not this is an Occupational Illness, for which some kind of monitoring or follow up is established)
- (2) The number, type and results of these studies carried out in each Business should be indicated.

## WORK ACCIDENT REPORT

(please read and follow the instructions for filling out  
this form and do not mark in the shaded areas)

TYPE ACCIDENT [1] [ ]  
RECURRENCE [2] [ ]

DATA

MARKING AREA

DATA

MARKING AREA

- 1 WORKER
- 2 EMPLOYER
- 3 CENTER
- 4 ACCIDENT
- 5 CARE
- 6 COST
- First name
- Surname
- Entry no.
- Sex M[1] F[2]
- Occupation
- Type of contract
- S.S. Program (\*)
- PRIMA: Division[ ] [ ] Unit[ ] [ ] [ ]
- Address

Tel

- Name
- S.S. Num.
- Tel
- Staff (No. workers)

- Address
- Tel
- Association doc. no.
- S.S. No.

- Accident date
- Location
- Usual work site [1]
- Away for work day [2]
- En route to/from work [3]
- At other work site [4]  
(specify name and address)
- Time of day of accident (1-24)
- Day of week
- Witness: address and tel.

- Description of injury(\*)
- Part of body injured(\*)
- Doctor giving first aid
  - Name
  - Address
  - Tel

## A) Monthly cost basis

- Previous month (1)
- Days budgeted (2)
- Regulatory basis A (3)

## B) Yearly cost basis

- B.1 - for extra hours
- B.2 - other reasons
- Total B1 + B2
- Daily average cost B (5)

Middle name  
S.S. No.  
Date of employment  
Date of birth  
State Id. No.  
S.S. payment group  
Age of work place (months)  
Relevant Agreement or Ordinance  
Province  
Town

Id. Card or State Id. No.  
Address  
Province  
Town

Province  
Town  
Main business

Was this his usual job Yes[1] No[2]  
Date of medical leave  
Hour of shift accident occurred (1st, 2nd, etc.)  
Description of accident

How accident happened (\*)  
Equipment or material involved

Seriousness of wound: Light[1],  
Serious[2], Very serious[3], Fatal[4]

Type of facility Hospital [1]  
Ambulance [2]

Health facility

C) Support  
Daily average  
- Regulatory base A  
- Regulatory base B  
Total daily regulatory base (6)  
Indemnification @ 75%

('4' starts here)

D

Labor Authority

Sender's No.

(? illegible) (seal &amp; date)

Organization No.

the named enterprise requests this report

## INSTRUCTIONS FOR COMPLETING THE WORK ACCIDENT REPORT

### GENERAL

This form should be completed in work accidents or recurrences which result in the worker being absent from the work place for at least one day (apart from the day the accident occurred), with medical leave granted.

By "recurrence" is meant "worker medical leave as a direct consequence of an earlier accident". In these cases, the date the accident actually happened should be given.

These Reports are to be filled in by the businesses or workers themselves or self-employed who have coverage, apart from the shaded areas, and should be submitted to the Managing or Cooperating Agency which is responsible for protection against work accidents, within at most five business days from the date on which the accident occurred or medical leave was granted.

The copies sent to the Managing or Cooperating Agency should be in triplicate: one for the Agency, one for the Labor Authority and one for the General Director of Information and Statistics of the Ministry of Labor and Social Security.

In the case of entries with several boxes, mark the appropriate one with an X.

### FOR THE DIFFERENT ENTRIES

1- Worker data 'Occupation' describes the occupation or profession in the most detail possible. For example, fitting electrician, crane operator, painter, etc. The codes for the entries "Type of work contract" and "S.S. payment group" will, for each worker, be the same used for completing the monthly Social Security Contribution Bulletin (Worker report 'TC-2')

By "Age of work place" is understood the time the worker has spent in the position where the accident occurred, or in similar positions, and will have a maximum value the age of the employing business. Age is indicated in months and, if the accident took place after less than one month, a 1 is used.

2- Employer data ; The C.I.F. (Fiscal Identification Code) should be written out in all nine digits, the first of which is always a letter [sic]. In case this does not exist, use the State Id. number of the employer.

3 - Work site data - This is understood as the area of the employing firm in which the worker usually works. By "Main activity" is understood that whose value added, volume of sales or level of employment constitute the greatest percentage of the business the employer does. For example, do not indicate "woodworking" but "manufacturing wooden containers and packaging: or "manufacturing wooden furniture" or "manufacturing unfinished wood products".

4 - Accident data - The entry 'Date of medical leave' may not coincide with the accident date.

Location of accident - the code (4) should be used when the accident has occurred in a work site different from usual, whether or not part of the business employing the worker, or in a work place which is not properly a work site. In cases (2), (3) and (4), the name and address of the accident location should be entered.

In the entry "Time of day of accident" the time is indicated using whole numbers, from 1 to 24.

"Hour of shift accident occurred" means the hour of the worker's work day in which the accident took place (first, second, etc) and is also indicated using whole numbers.

In the heading "How the accident occurred" the code which is shown below is used.

In the "Accident description" one tries to describe clearly and concisely the job the worker was doing when the accident occurred and the attendant circumstances.

5. Care Data. - The boxes in the entry "Seriousness of injury" are identical to those used in the Report of Medical Leave, so that the values used there can be copied here.

In the headings "Description of Injury" and "Part of body injured" the corresponding code from those given below is used.

6. Economic Data (illegible)

## LIST OF CODES TO USE

Social Security Group	14 Exposure to extreme air temperature	41 Conjunctivitis
1 General	15 Touching objects at extreme temperature	42 Burn
2 Autonomous	16 Electric shock	43 Poisoning
3 Agricultural	17 Exposure to harmful substances	44 Exposure to substance in atmosphere
4 Marine	18 Exposure to caustic or corrosive substances	45 Asphyxiation
5 Coal mining	19 Exposure to radiation	46 Effects of electricity
6 Employed at home	20 Explosion	47 Effects of radiation
7 School insurance	21 Fire	48 Multiple injuries
	22 Accidents caused by animals	49 Infarcts, stroke or other disease without trauma
How accident occurred:	23 Struck by vehicle	
01 Falls to a lower level		Part of body injured
02 Falls to same level	Description of injury	60 Cranium
03 Objects falling or tipping over	30 Fracture	61 Face, except eyes
04 Objects being dropped	31 Dislocation	62 Eyes
05 Objects falling from grasp	32 Twist, sprain, swelling	63 Neck
06 Tripping	33 Lumbago	64 Thorax, back, ribs
07 Collision with immovable object	34 Hernia	65 Lumbar region and abdomen
08 Collision with movable object	35 Concussion/internal injury	66 Genitalia
09 Blows from objects or tools	36 Amputation/loss of eye	67 Hands
10 Hit by fragments or particles	37 Other wound	68 Arms and collar bones
11 Caught in objects	38 Superficial wound	69 Feet
12 Caught by motion machinery, vehicles, etc	39 Contusion/bruise	70 Legs and hips
13 Overexertion	40 Foreign bodies in eye	71 Multiple injuries
		72 Internal organs

## IMPORTANT

(illegible)



## Document No 31

Ministry for Industry, Trade and Tourism  
CENTER FOR ENERGY, ENVIRONMENTAL, AND  
TECHNOLOGICAL RESEARCH  
(CIEMAT)

MEDICAL LEAVE FOR:

(check answer)

Work Acc. [ ]  
Occ. Illness [ ]

SENDER'S NO. \_\_\_\_\_

WORKER \_\_\_\_\_

First name Middle name Surname

State Id. No. S.S. No. \_\_\_\_\_

Address (St.,No.) Town P. C.

BUSINESS \_\_\_\_\_ S.S. No.

CENTER FOR ENERGY, ENVIRONMENTAL, AND  
TECHNOLOGICAL RESEARCH

Address (St.,No.) \_\_\_\_\_

Complutense 22 Prov.

Town \_\_\_\_\_

MADRID

P. C.

28040 \_\_\_\_\_

Province \_\_\_\_\_

MADRID

Date of W.A. or O.I. Est. Length of Leave

TREATED AT:

1 Home 2 Outpatient 3 Hospital

Care provided by Signing staff [ ]

Health Center \_\_\_\_\_

Specialist, Dr \_\_\_\_\_

DIAGNOSIS:

PROGNOSIS LIGHT [ ] NOT TOO SERIOUS [ ]

SERIOUS [ ]

Health Service Inspector

DOCTOR (Last name and First Name) \_\_\_\_\_

BOARD No.

/ /

TOWN \_\_\_\_\_

DOCTOR'S SIGNATURE \_\_\_\_\_

Date of Leave

Day Mo. Yr.

## Document No 32

Ministry for Industry, Trade and Tourism  
CENTER FOR ENERGY, ENVIRONMENTAL, AND  
TECHNOLOGICAL RESEARCH  
(CIEMAT)

MEDICAL DISCHARGE FOR

(check answer)

Work Acc. [ ]  
Occ. Illness [ ]

SENDER'S NO. \_\_\_\_\_

HEALTH SERVICE INSPECTOR DOCTOR(Sur- &  
forenames) Dr.

Signature DATE OF LEAVE \_\_\_\_\_ D M

YR \_\_\_\_\_

BOARD No. TOWN  
/ /DOC 32- THE PART IN LARGE BOX IS IDENTICAL TO  
DOC 31 ABOVE

IE, I ENCLUDE ONLY SMALL BOX, UPPER LEFT [IN  
FACT, ONLY THE UNDERLINED PART OF THAT] AND THE  
STUFF BELOW. I WILL INDICATE SP. AT START EACH  
BOX]

PARTE MEDICO...= DISCHARGE FOR MEDICAL REASONS

\*\*

(FROM "causa del alta" on:) \_\_\_\_\_

REASON FOR DISCHARGE \_\_\_\_\_

1 CURE 2 DEATH 3 [ILLEG.] TEMP.  
4 REPORT FORTHCOMING 5 TO BE  
INVESTIGATED

\*\*

Other Care Data, Aftereffects Send to  
Another Facility

WOUNDS, DEFORMITY, MUTILATION, DISABLING  
CONSEQUENCES \_\_\_\_\_

\*\*

PERMENENT \_\_\_\_\_

\*\*

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MINISTRY OF  
INDUSTRY  
TRADE AND  
TOURISM

Center for Energy  
Environmental  
and Technological  
Research

**MEDICAL SERVICE**

## Week No. \_\_\_\_\_

No.	Forename and Surname	Date of Accident	Leave Date	Discharge date	Cause (1)
-----	----------------------	------------------	------------	----------------	-----------

[illegible]

Month	Year
-------	------

NATIONAL INSTITUTE OF HEALTH  
MORBIDITY AND MORTALITY DATA FOR W.A. & O.I.  
W.A. & O.I. GROUP of the SOCIAL SECURITY

Group Number	Number	Address	Town	Province
--------------	--------	---------	------	----------

QUANTITATIVE DATA

	Workers Employed (1)	Leaves Taken (2)	Leaves E.O.M. (3)	Discharges (4)	Leave Taken by Dischargees (5)	Number of Dead	Percentage on Leave (6)	Monthly Leave Index (7)	Average Leave Length (8)
Work Accidents									
Occupational Illnesses									

QUALITATIVE DATA ON OCCUPATIONAL ILLNESS

DIAGNOSIS (9)	Letter/No. (10)	Worker No. (11)	Leave Date (12)	Date of Discharge (13)

see reverse

- 1) WORKERS EMPLOYED: Data supplied by the National Institute of Health and Safety. If possible, the data supplied will be entered, if this is not possible, data supplied for the end of the year or the most recent supplied should be used. Indicate the date of this datum.
- 2) LEAVES TAKEN: In this box enter the number of W.A. & O.I. leaves granted in the month referred to, that is, the total of all leaves granted from the first to the last day of the month, even if the leave date is in the previous month or that some leaves from the month in question will be taken the next month.
- 3) LEAVES AT END OF MONTH: In this section count the number of leaves in effect on the last day of the month, so that leaves that have terminated before this day are not counted.
- 4) DISCHARGES GRANTED: In this box enter all the discharges granted from the first to the last day of the month, regardless of whether leave was taken the month before.
- 5) LEAVE TAKEN BY DISCHARGEES: On receiving a discharge, count the total number of days the injured or ill worker has been on leave, from its beginning, regardless of the month leave was granted. The total of all leave days taken by all dischargees of the month in question is then calculated.
- 6) PERCENTAGE OF LEAVES: This is calculated by multiplying the entry in box 3 (number of leaves at E.O.M.) by 100 and dividing by the figure in box 1 (Workers Employed).
- 7) MONTHLY LEAVE INDEX: This is calculated using the entry in box 2 (number of leaves at E.O.M.) by 100 and dividing by the entry in box 1 (Workers Employed).
- 8) AVERAGE LENGTH OF LEAVE: This is calculated by dividing the entry in box 5 (leave days of dischargees), by the figure in box 4 (leaves granted).
- 9) DIAGNOSIS: Enter here the diagnosis given in the leave report prepared by the staff member taking care of the patient.
- 10) LETTER/NUMBER from R.D 1995/78 manual: Use here the letter and number in the list of Occupational Illnesses from the manual approved by Royal Decree number 1995/78, 12 May.
- 11) WORKER'S NUMBER: Enter here the worker's Social Security Number.
- 12) LEAVE DATE: Enter here the date used in the leave report prepared by the staff member taking care of the patient.
- 13) DISCHARGE DATE: Enter here the date used in the discharge report prepared by the staff member taking care of the patient.

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/214

WORKER CLINICAL REPORT-RECOMMENDATION

(under seal follows:)

Ministry of Health and Consumer Affairs  
NATIONAL HEALTH INSTITUTE

\*\*

STAFF AND SUPERVISING AGENCY DATA

(SEE BOX= DONE BY HAND)

\*\*

PATIENT PERSONAL AND WORK DATA

(SEE BOX)

## CLINICAL WORKER DATA

Family History
Personal History
Present Illness (Summary)
General condition of patient Weight_____ Height _____ Build _____ Gait _____ Musculature _____ Skin, Mucous membranes _____ General appearance _____ Mouth and teeth _____ Other _____
Description from clinical manual, by organs or systems (tests used and results)
Diagnosis (main and secondary)
Treatment performed
Changes

Possible therapy and rehabilitation

Centers and Services giving care to the patient (Periods of hospitalization)

Organic and functional restrictions (Eg. Mental decline,

Degree of pathological disability by etiology

Labor Report (Description of the work performed by the patient, work place, work day, etc.)

Social, family, working situation in the community

Level of education and training



## PROVISIONAL RECOMMENDATION

Work clinic opinion (presenting the considerations involved in the recommendation)

Recommendation (4)

Date: \_\_\_\_\_

Signed: \_\_\_\_\_

## NOTES:

This report is a public document which has great importance for the health and socio-economics of the individual and of society.

- 1) The patient's main profession is that which he has been chiefly occupied with throughout his life.
- 2) Only indicate leave periods exceeding 30 days for the previous ten years.
- 3) Ignore brief work leave; Resulting in Permanent Disability.; Existence of P.D.; Period of observation during O.I.; Permanent Disability; Eligible for benefits  
[note 4 has been cut off the bottom of sheet)

MINISTRY OF  
INDUSTRY  
TRADE AND  
TOURISM

Center for Energy  
Environmental  
and Technological  
Research

/218  
MEDICAL SERVICE

REQUEST FOR HEALTH CARE

Case No. \_\_\_\_\_

Dear Colleague:

Would you please provide care for Mr.\_\_\_\_  
an employee of this Firm, to treat\_\_

--  
--

Please accept my best wishes.

Madrid, the      of      199\_\_  
CHEIF OF THE MEDICAL SERVICE  
Signed: \_\_\_\_\_

Ministry of Health and Consumer Affairs  
NATIONAL INSTITUTE OF HEALTH

Copy No. (Agency Use) \_\_\_\_\_

**DECLARATION OF OCCUPATIONAL ILLNESS**

EMPLOYEE DATA

Sur- & Forenames \_\_\_\_\_ S.S. No. \_\_\_\_\_

D.O.B. Sex \_\_\_\_\_ Address \_\_\_\_\_

Town \_\_\_\_\_ Post Code \_\_\_\_\_ Province \_\_\_\_\_

\*\*

EMPLOYER DATA

Name \_\_\_\_\_ S.S. Reg. No. \_\_\_\_\_

Address \_\_\_\_\_ Town \_\_\_\_\_ Post Code \_\_\_\_\_ Province \_\_\_\_\_

Activity (1)

Managing Co. or Affiliate \_\_\_\_\_

\*\*

DATA ON ACTIVITY

Started Pres. Job \_\_\_\_\_ Pres. Work Place (2) \_\_\_\_\_

Former work places (2) \_\_\_\_\_

\*\*

DATA OF OCCUPATIONAL ILLNESS

Current Illness(3) \_\_\_\_\_

Date of Work Leave (4)

History of Occupational Disease \_\_\_\_\_

1) - 4) (illegible)

box) DATA OF NOTIFYING AGENCY

Name of Center \_\_\_\_\_

Sur- & Forenames of Head \_\_\_\_\_

Date \_\_\_\_\_  
(signature)

1)

AGENT OR EMPLOYER HEALTH GROUP \_\_\_\_\_

Regulation(1) \_\_\_\_\_

2)

REPORT OF OCCUPATIONAL  
ILLNESS  
(quadruplicate copies)

Assoc. Doc. No. \_\_\_\_\_

3)

Date of Diagnosis \_\_\_\_\_

Yes

Leave taken \_\_\_\_\_

No

4) Recording Number in List of Mishaps \_\_\_\_\_

5) 1. Worker Data

Fore- &amp; Surnames \_\_\_\_\_

Employment Book No. S.S. No.

Date of Employment \_\_\_\_\_

\*

Sex Civ. Status D.O.B. Position Grade Total Hrs. Time in  
Job

\*

Address Town Province Regulation/Agreement Applying

\*

Birthplace Nat. Id. No. \_\_\_\_\_

Work at Time of Diagnosis | Previous Work

\*

1. EMPLOYER DATA

Name Staff Activity S.S. Reg. No.

\*

Business Address Tel. Town Province

\*

Location of Work Site Tel. Town Province

\*

3. Data of previous employers which may exposed the worker to  
occupational hazards:Name Business Address Activity Dates Hiring  
Leaving

\*

4. DATA ON ILLNESS

Class of Occupational Illness \_\_\_\_\_

Description of the work that  
is considered to have caused illness \_\_\_\_\_

Time (months) exposed to hazard \_\_\_\_\_

\*\*

Does he have a health card (2) Yes / No \_\_\_\_\_

Date of last medical \_\_\_\_\_

Date of last periodic medical \_\_\_\_\_

Diagnosis \_\_\_\_\_

\*\*

Description of illness (main symptoms. Clinical Manual) \_\_\_\_\_

Seriousness of Illness

Character of diagnosis

Light \_\_\_\_\_

Serious \_\_\_\_\_

Very Serious \_\_\_\_\_

Fatal (6) \_\_\_\_\_

Certain (6) \_\_\_\_\_

Tentative \_\_\_\_\_

\*\*

a)

LABOR DELEGATION

(Seal and Date) \_\_\_\_\_

\*\*

B)

Mr. \_\_\_\_\_, as \_\_\_\_\_ of the named employer,  
submits this Report, in quadruplicate, on the \_\_\_\_\_ of \_\_\_\_\_,  
199

(Seal and signature) \_\_\_\_\_

**DETERMINATION OF TEMPORARY WORKER DISABILITY COMPENSATION FOR  
OCCUPATIONAL ILLNESS**

#### A. Basis for calculation using monthly wages

Payment in previous month (1)	Days' Wages	Average
Pta.	Pta.	= Pta.

B. Basis for calculation using irregularly paid work compensation for the previous year

B.1. Overtime	Pta.

B.2. Other descriptions	Pta.
-------------------------	------

Total basis (B1 + B2)		Pta.
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
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358	359	360
361	362	363
364	365	366
367</		

### C. Calculation of compensation

Daily average	Total daily base (6)
---------------	----------------------

Compensation 75¢(7)

Base A	Base B.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
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99	99
100	100

(4 bottom boxes as text)

## INSTRUCTIONS

1) In the box immediately below, next to "pesetas", indicate the size of the wages that were paid to the worker in the month immediately preceding the accident, excluding the sources listed in B.

If the worker has started work in the same month that the temporary work disability occurred, the amounts indicated will be for those days he has worked for the Firm.

2) If the worker is paid monthly and has been paid for an entire month while on leave, then the number of days is 30, otherwise indicate the number of days actually worked.

3) Divide the amount of wages paid by the number of days worked to obtain the daily average wage.

4) This indicates the sum of the wages paid for these types of work over the previous twelve months.

5) Divide the total of base B by 365 dias to obtain the daily

average.

6) The sum of the two daily averages A and B will give the daily compensation base.

7) Taking 75% of the daily compensation basis gives the daily compensation which the worker should receive from the day following the start of his leave as a result of work accident until he is given medical discharge, inclusive. The amount of the compensation should not exceed 75% of the daily average of the wage ceiling in effect at the time of the accident for the job the worker does.



**SALARY HISTORY**

DESCRIPTION	No. Days	Annual wage
Total payment for work days	_____	_____
Total payment for non-work days	_____	_____
Total payment for seniority bonuses	_____	_____
Total payment for piecework	_____	_____
Total payment for overtime	_____	_____
Total payment for Sunday time	_____	_____
Total payment for lost holiday time	_____	_____
Total payment for vacation days worked	_____	_____
Total payment for vacation time	_____	_____
Total payment for 18 July bonus	_____	_____
Total payment for Christmas bonus	_____	_____
Total payment for extra bonuses	_____	_____
Total payment for mandatory bonuses	_____	_____
Total payment from benefits	_____	_____
Total payment for incentive schemes	_____	_____
Total payment for sick days	_____	_____
Total payment for hazardous duty	_____	_____

\_\_\_\_\_ indicate the description  
 Other payments \_\_\_\_\_

Total payments \_\_\_\_\_

Total number of days worked in the year: \_\_\_\_\_ days \_\_\_\_\_

Last daily wage rate.....pesetas....centimos.

Daily seniority bonus....pesetas....centimos.

THE PERIOD OF TWELVE CONSECUTIVE MONTHS CONSIDERED HERE

From the \_\_\_\_\_ of \_\_\_\_\_, 19 \_\_\_\_\_ to the \_\_\_\_\_ of \_\_\_\_\_, 19 \_\_\_\_\_

**DEPENDENTS OF THE EMPLOYEE**

Sur- & Forenames \_\_\_\_\_ Date and Place of Birth \_\_\_\_\_

Relationship \_\_\_\_\_ Disabled? \_\_\_\_\_

(bottom of box has following)

N.B. List all children younger than 18 years, or older if disabled, and daughters up to 21 years.

**REMARKS**

At \_\_\_\_\_ the \_\_\_\_ of \_\_\_\_\_ , 19 \_\_\_\_\_

CERTIFICATION OF DATA \_\_\_\_\_ (Signature and seal of Employer)  
Employee or dependent \_\_\_\_\_

**DOCUMENTS WHICH MUST BE CERTIFIED BY THE SUPPLIER****PERMANENT DISABILITIES****Partial or Total**

1. Report of Permanent Disability or Death, duplicate
2. Certificate of Medical Discharge
3. Employee Birth certificate, from National Registry
4. Employee Health card, or copy
5. Two Id. size photographs

**Major or Complete Handicap**

1. The same documents as above
2. Birth certificates of children or adopted children younger than 18
3. Birth certificates of disabled children older than 18
4. Birth certificates of daughters aged 18 to 21

**DEATH****Necessary in all cases**

1. Report of Permanent Disability or Death, duplicate
2. Certificate of Medical Discharge by reason of death
3. Employee Health card, or copy
4. Death certificate, with causes, from Civil Registry
5. Certified copy of Autopsy Report, from Civil Registry

**Widow, no children**

1. Documentation above
2. Marriage certificate, from Civil Registry
3. Widow's Birth Certificate, from Civil Registry
4. Two Id. size photographs of the widow

**Widow and children, or adoptees**

1. The general documentation above
2. Marriage certificate, from Civil Registry
3. Widow's Birth Certificate, from Civil Registry
4. Birth certificates of children younger than 18
5. Birth certificates of disabled children older than 18
6. Birth certificates of daughters aged 18 to 21
7. Two Id. size photographs of the widow

**Children or adoptees with no mother**

1. The general documentation above
2. Mother's death certificate, from Civil Registry

3. Birth certificates of children or adoptees under 18
4. Birth certificates of disabled children older than 18
5. Birth certificates of daughters aged 18 to 21
6. Name of guardian or person caring for children in their home
7. Document demonstrating shared habitation and financial dependence of adoptees
8. Two Id. size photographs of the guardian

Note: Civil Register Certificates can be substituted for by certificates supplied by members of the National Institute of  
[document truncated here]

Orphaned siblings or adopted siblings (if no widow, children and adopted children)

1. The general documentation above
2. Birth certificates of siblings or adoptees under 18 disabled older than 18 and females aged 18 to 21
3. Document demonstrating shared habitation and financial dependence
4. Appointment of guardian and their address
5. Parents' death certificates
6. Two Id. size photographs

Widowed mother

1. The general documentation above
2. Mother's Birth Certificate
3. Husband's Death Certificate
4. Certificate of cohabitation and financial dependence, provided by Mayor's Office
5. Certificate of relative hardship, supplied by Mayor's Office
6. Certificate of non-inclusion in the provisions of the Benifits supplied by the Economy Agency (Delegacion de Hacienda) from the Industry tax.
7. Certificate of non elegibility for Non-worker benefits from the Economy Agency, or of the size of such benefits
8. Certificate of missed payment to farmers, ranchers, and urban fund, stating amount, if a member, from the Economy Agency [the exact nature of this payment is not possible to clarify, but what is requested is evidence of hardship]
9. Two Id. photographs

Forebears

1. The general documentation above
2. Forebear's Birth Certificate
3. Certificate of cohabitation and financial dependence, provided by Mayor's Office
4. Certificate of relative hardship, supplied by Mayor's Office
5. Certificate of non-inclusion in the provisions of the Benifits supplied by the Economy Agency (Delegacion de Hacienda) from the Industry tax.
6. Certificate of non elegibility for Non-worker benefits from the Economy Agency, or of the size of such benefits
7. Certificate of missed payment to farmers, ranchers, and urban fund, stating amount, if a member, from the Economy Agency [the exact nature of this payment is not possible to clarify, but what is requested is evidence of

- hardship]
- 8. Two Id. photographs

COMPLEMENTARY DOCUMENTS

- 1. Whatever else may be needed, at the request of the Compensation Fund

# SALARY HISTORY

DESCRIPTION	No. Days	Annual wage
Total payment for work days		
Total payment for non-work days		
Total payment for seniority bonuses		
Total payment for piecework		
Total payment for overtime		
Total payment for Sunday time		
Total payment for lost holiday time		
Total payment for vacation days worked		
Total payment for vacation time		
Total payment for 18 July bonus		
Total payment for Christmas bonus		
Total payment for extra bonuses		
Total payment for mandatory bonuses		
Total payment from benefits		
Total payment for incentive schemes		
Total payment for sick days		
Total payment for hazardous duty		

indicate the description  
Other payments

Total payments

Total number of days worked in the year: days

Last daily wage rate.....pesetas....centimos.

Daily seniority bonus....pesetas....centimos.

THE PERIOD OF TWELVE CONSECUTIVE MONTHS CONSIDERED HERE

From the of , 19 to the of , 19

## DEPENDENTS OF THE EMPLOYEE

Sur- & Forenames Date and Place of Birth

Relationship Disabled?

(bottom of boxhas following)

N.B. List all children younger than 18 years, or older if disabled, and daughters up to 21 years.

REMARKS

At \_\_\_\_\_ the \_\_\_\_\_ of \_\_\_\_\_ , 19 \_\_\_\_\_  
CERTIFICATION OF DATA (Signature and seal of Employer)  
Employee or dependent



MINISTRY OF  
INDUSTRY  
TRADE AND  
TOURISM

Center for Energy  
Environmental  
and Technological  
Research

/226  
MEDICAL SERVICE

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COMMUNICATION OF RESULTS

Case No. \_\_\_\_\_

Attached please find the results of the examination  
performed by this Service on:

Madrid, the \_\_\_\_ of \_\_\_\_ 199 \_\_\_\_\_

Cheif of the Medical Service

Signed: \_\_\_\_\_

MINISTRY OF  
INDUSTRY  
TRADE AND  
TOURISM

Center for Energy  
Environmental  
and Technological  
Research

MEDICAL SERVICE

# REPORT OF BREIF MEDICAL ABSENCE

Sur- and Forenames \_\_\_\_\_  
 State Id. No. \_\_\_\_\_  
 Profession: \_\_\_\_\_ Grade: \_\_\_\_\_  
 Facility/Office \_\_\_\_\_ Organization Code: \_\_\_\_\_  
 Program/Area of Activity \_\_\_\_\_  
 Building Plant: Outbuilding Tel

Head of the \_\_\_\_\_:

I hereby notify you, as soon as possible, that the above  
 named employee will have a medical work absence  
 during: \_\_\_\_\_

Madrid, the \_\_\_\_ of \_\_\_\_ 199 \_\_\_\_

Cheif of the Medical Service

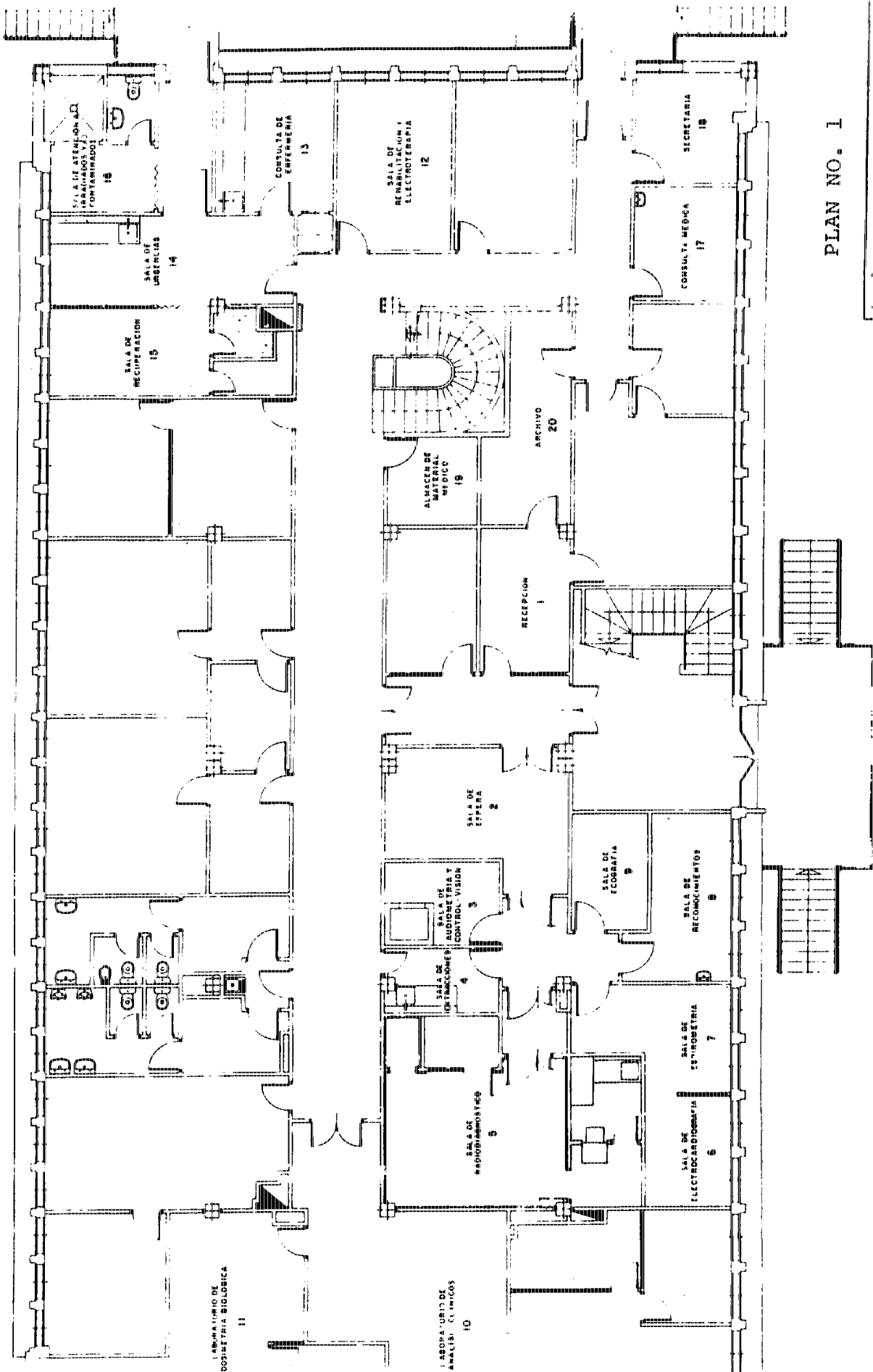
Signed: \_\_\_\_\_

**SUPPLEMENT II**

**PLANS**

**LIST OF PLANS**

Plan No. 1: Medical Service Facilities in Plant 1, Bldg. 7  
Plan No. 2: Radioactive Installation IR-23



PLAN NO. 1

C. I. E. M. A. T.

REPOSICION DE LOS  
Canales de Sirenas en la  
PLANTA BAJO

100

JULIO 1991

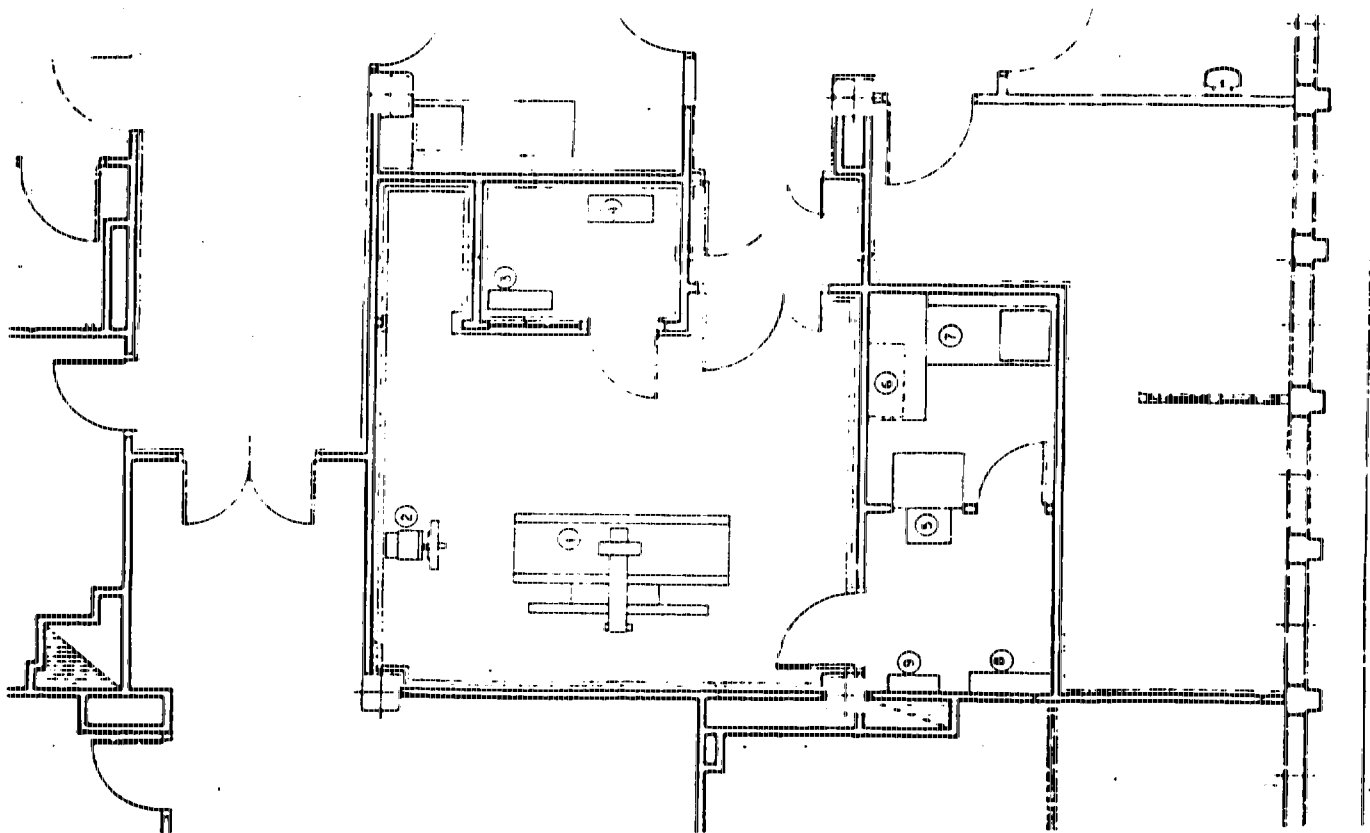
- 1- Biological Dosimetry Outpatient Area
- 1- Recovery Room
- 3- Emergency Room
- 4\_ Room for Treating Irradiated and Contaminated Patients
- 5- Clinical Analysis Lab
- 6- Radiodiagnosis Theatre
- 7- Extraction Theater
- 8- Vision and Hearing Testing Room
- 9- Waiting Room
- 10- Reception
- 11- Medical Supplies
- 12- Archive
- 13- Infirmary
- 14- Electrotherapy and Rehabilitation
- 15- Electrocardiography
- 16- Respirometry
- 17- Ultrasound Theatre
- 18- Examination Room
- 19- Doctor's Consulting Room
- 20- Secretary
- 21\_ Plan No. 1

22- CIEMAT

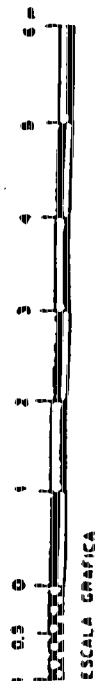
Scale 1:100

July 10, 1991


[the rest is illegible]



- ① MESA PLANIGRAFICA MULTIX CP
- ② BUCKY MURAL "ES"
- ③ PUPITRE DE MANDOS
- ④ ARMARIO DE POTENCIA (GENERADOR)
- ⑤ PROCESADOR AUTOMATICO DE PLACAS RADIOGRAFICAS
- ⑥ MEZCLADOR AUTOMATICO
- ⑦ MUEBLE CON PILETA DE ACERO INOXIDABLE
- ⑧ ARMARIO ARCHIVADOR
- ⑨ NEGATOSCOPIO



PLAN NO. 2

DIBUJADO CONFORME		NOMBRE F de Arcos	FECHA Mayo 91	INSTALACION IR-23  ELEMENTOS MATERIALES	
				ESCALA	
DIRECCION DE SEGURIDAD				Núm. DS/217-00  Grafica	

PLAN NO. 2

/231

- 1- Multix CP Drafting Table
- 2- Bucky "ES" vertical display
- 3- Control Console
- 4- Power Supply (Generator)
- 5- Automatic X-ray Film Developer
- 6- Automatic Developing Soln. Mixer
- 7- Stainless Steel Table and Sink
- 8- File Cabinet
- 9- Light Table
- 10\_ Scale

11- Plan Number 2

12-	NAME	DATE	INSTALLATION IR-23
	Draftsman F. de Arcos	May '91	

BASIC ELEMENTS

Checked by

**CIEMAT**

SAFETY OFFICE

No. DS/217-00

SCALE



APPENDIX III

RECORD OF STRUCTURAL CHARACTERISTICS  
OF X-RAY SECTIONS IN BUILDING NO. 7  
OF CIEMAT

CIEMAT

MEMO ON CONSTRUCTION PROPERTIES FOR LOCATIONS INTENDED  
FOR X-RAY FACILITIES IN **CIEMAT** BLDG. No. 7 FOR MEDICAL USE

**MEMO**

DATE: Madrid, January 1991